

# User Manual

# ME40A ME46A ME55A

The color and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

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### Cleaning

Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.

Take the following steps when cleaning.



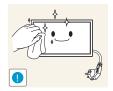
The following images are for reference only. Real-life situations may differ from what is shown in the images.



- 1. Power off the product and computer.
- 2. Disconnect the power cord from the product.



Hold the power cable by the plug and do not touch the cable with wet hands. Otherwise, an electric shock may result.



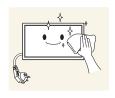
3. Wipe the product with a clean, soft and dry cloth.



 Do not use detergents that contain alcohol, solvent or surface-active agents.



Do not spray water or detergent directly on the product.



4. Wet a soft and dry cloth in water and wring thoroughly to clean the exterior of the product.



- 5. Connect the power cord to the product when cleaning is finished.
- 6. Power on the product and computer.

#### **Storage**

High-glossy models can develop white stains on the surface if an ultrasonic wave humidifier is used nearby.



Contact Customer Service Center if the inside of the product needs cleaning (service fee will be charged).

# **Safety Precautions**

#### **CAUTION**

#### RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.



This symbol indicates that high voltage is present inside. It is dangerous to make any kind of contact with any internal part of this product.



This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

#### **Symbols**

⚠ Warning	A serious or fatal injury may result if instructions are not followed.
Caution	Personal injury or damage to properties may result if instructions are not followed.
$\Diamond$	Activities marked by this symbol are prohibited.
0	Instructions marked by this symbol must be followed.

#### **Electricity and Safety**



The following images are for reference only. Real-life situations may differ from what is shown in the images.



#### Warning



Do not use a damaged power cord or plug, or a loose power socket.

An electric shock or fire may result.



Do not use multiple products with a single power socket.

Overheated power sockets may cause a fire.



Do not touch the power plug with wet hands. Otherwise, an electric shock may result.



Insert the power plug all the way in so it is not loose.

An unsecure connection may cause a fire.



Connect the power plug to a grounded power socket (type 1 insulated devices only).

An electric shock or injury may result.



Do not bend or pull the power cord with force. Be careful not to leave the power cord under a heavy object.

• Damage to the cord may result in a fire or electric shock.



Do not place the power cord or product near heat sources.

• A fire or electric shock may result.



Clean any dust around the pins of the power plug or the power socket with a dry cloth.

A fire may result.





Do not disconnect the power cord while the product is being used.

The product may become damaged by an electric shock.



Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.

A fire or electric shock may result.



Keep the power socket where the power cord is connected unobstructed.

- The power cord must be disconnected to cut off power to the product when an issue occurs.
- Note that the product is not completely powered down by using only the power button on the remote.



Hold the plug when disconnecting the power cord from the power socket.

An electric shock or fire may result.

#### Installation



#### Warning



DO NOT PLACE CANDLES, INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT. DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.

A fire may result.



Have a technician install the wall-mount hanger.

- Installation by an unqualified person can result in an injury.
- Only use approved cabinets.



Do not install the product in poorly ventilated spaces such as a bookcase or closet.

An increased internal temperature may cause a fire.



Install the product at least 10cm away from the wall to allow ventilation.

An increased internal temperature may cause a fire.



Keep the plastic packaging out of the reach of children.

Children may suffocate.



Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)

- The product may fall and become damaged and/or cause an injury.
- Using the product in an area with excess vibration may damage the product or cause a fire.



Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.

A fire or electric shock may result.



Do not expose the product to direct sunlight, heat, or a hot object such as a stove.

• The product lifespan may be reduced or a fire may result.



Do not install the product within the reach of young children.

- The product may fall and injure children.
- As the front is heavy, install the product on a flat and stable surface.



Bend and keep part of the outdoor TV antenna cable hanging downwards (the part inside the room) to prevent rainwater from entering the product.

• If rainwater enters the product, a fire or electric shock can occur.



When using an outdoor antenna, be sure to install the antenna away from nearby power lines to prevent the antenna from collapsing onto them in strong winds.

• A collapsed antenna can cause an electric shock or injury.



#### **Caution**



Do not drop the product while moving.

Product failure or personal injury may result.



Do not set down the product on its front.

The screen may become damaged.



When installing the product on a cabinet or shelf, make sure that the bottom edge of the front of the product is not protruding.

- The product may fall and become damaged and/or cause an injury.
- Install the product only on cabinets or shelves of the right size.



Set down the product gently

Product failure or personal injury may result.



Installing the product in an unusual place (a place exposed to a lot of fine particles, chemical substances or extreme temperatures, or an airport or train station where the product should operate continuously for an extended period of time) may seriously affect its performance.

• Be sure to consult Samsung Customer Service Center if you want to install the product at such a place.

#### Operation



#### Warning



There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.

- A fire or electric shock may result.
- Contact Samsung Customer Service Center for repairs.



Before moving the product, turn off the power switch and disconnect the power cord, antenna cable and all other connected cables.

• Damage to the cord may result in a fire or electric shock.



If the product generates abnormal sounds, a burning smell or smoke, disconnect the power cord immediately and contact Samsung Customer Service Center.

An electric shock or fire may result.



Do not let children hang from the product or climb on top of it.

Children may become injured or seriously harmed.



If the product is dropped or the outer case is damaged, turn off the power switch and disconnect the power cord. Then contact Samsung Customer Service Center.

Continued use can result in a fire or electric shock.



Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

• The product or heavy objects may fall as children try to reach for the toys or sweets resulting in a serious injury.



During a lightning or thunderstorm, remove the power cord and do not touch the antenna cable.

A fire or electric shock may result.



Do not drop objects on the product or apply impact.

A fire or electric shock may result.



Do not move the product by pulling the power cord or any cable.

Product failure, an electric shock or fire may result from a damaged cable.



If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.
- Never touch the power cord or antenna cable when thunder or lightning is present.



Do not lift or move the product by pulling the power cord or any cable.

• Product failure, an electric shock or fire may result from a damaged cable.



Do not use or keep combustible spray or an inflammable substance near the product.

An explosion or fire may result.



Ensure the vents are not blocked by tablecloths or curtains.

An increased internal temperature may cause a fire.



Do not insert metallic objects (chopsticks, coins, hairpins, etc) or objects that burn easily (paper, matches, etc) into the product (via the vent or input/output ports, etc).

- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.



Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.

- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Center.
- Product failure, an electric shock or fire may result.





Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.

 Activate power-saving mode or a moving-picture screen saver if you will not be using the product for an extended period of time.



Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc).

 Dust accumulation combined with heat can cause a fire, electric shock or electric leakage.



Use the product at the recommended resolution and frequency.

Your eyesight may deteriorate.



Do not hold the product upside-down or move it by holding the stand.

• The product may fall and become damaged or cause an injury.



Looking at the screen too close for an extended period of time can deteriorate your eyesight.



Do not use humidifiers or stoves around the product.

A fire or electric shock may result.



Rest your eyes for more than 5 minutes for every 1 hour of product use.

Eye fatigue will be relieved.



Do not touch the screen when the product has been turned on for an extended period of time as it will become hot.



Store small accessories out of the reach of children.



Exercise caution when adjusting the product angle or stand height.

- Your hand or finger may get stuck and injured.
- Tilting the product at an excessive angle may cause the product to fall and an injury may result.



Do not place heavy objects on the product.

Product failure or personal injury may result.

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## 1.1 Checking the Contents

#### 1.1.1 Removing the Packaging

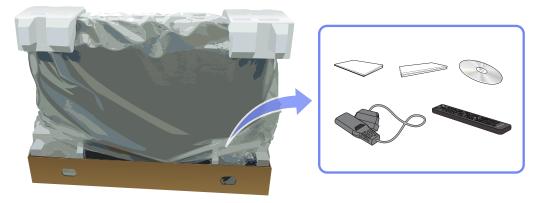
1 Remove the black locking device at the bottom of the box.



2 Using the grooves in the box, lift and remove the top of the box.



- 3 Check the components and remove the styrofoam and plastic bag.
  - The appearance of actual components may differ from the image shown.



- This image is for reference only.
- 4 Store the box in a dry area so that it can be used when moving the product in the future.

#### 1.1.2 Checking the Components



- Contact the vendor where you purchased the product if any components are missing.
- The appearance of the components and items sold separately may differ from the image shown.
- A stand is not provided with the product. To install a stand, you can purchase one separately.

#### Components



Components may differ in different locations.



Quick setup guide



Warranty card
(Not available in all locations)



User manual



MagicInfo Lite Edition Software CD



Cleaning cloth



Power cord



Remote Control



Batteries
(Not available in all locations)



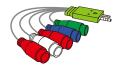
D-SUB cable



RS232C(OUT) Adapter



RS232C(IN) Adapter



AV/Component Adapter



Holder-Wire stand



Holder-Ring (4EA)

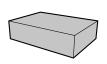


The RS232C adapter can be used to connect to another monitor using the D-SUB (9-pin) type RS232C cable. Ensure you connect each of the adapters to the correct RS232C IN or OUT port on the product.

#### Items sold separately



- The stand is not supplied.
- The following items can be purchased at your nearest retailer.



Wall-mount KIT



RS232C-Stereo Cable



DVI cable



HDMI-DVI cable



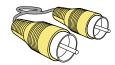
HDMI cable



DP cable



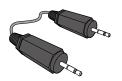
RCA stereo cable



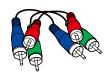
Video cable



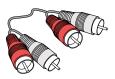
LAN cable



Stereo cable



Component cable



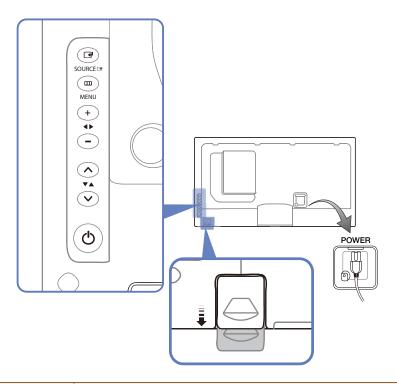
RCA cable

### 1.2 Parts

#### 1.2.1 Control Panel



- The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.
- Keep the area between the remote sensor and remote control obstacle-free.



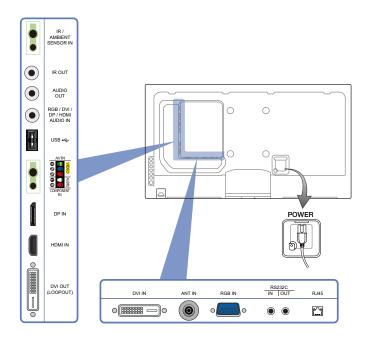
Sensor	Description
SOURCE □	Selects the input source that an external device is connected to.
MENU	Opens the on-screen menu and exits from the menu. Also use to exit the OSD menu or return to the previous menu.
+	Moves from one menu item to another horizontally or adjusts selected menu values.
<ul><li>♠</li><li>✓</li><li>✓</li></ul>	Moves from one menu item to another vertically or adjusts selected menu values.

Sensor	Description
(4)	Use this button for turning the Display on and off.
Remote sensor	Receives signals from the remote  To control the remote control in front of the product, lower the remote control sensor in the direction of the arrow (indicated in the zoomed-in image on the previous page).
	Keep the area between the remote sensor and remote control obstacle-free.

#### 1.2.2 Reverse Side

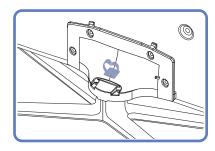


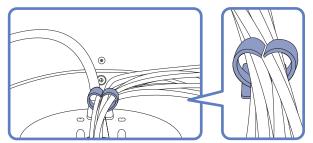
The color and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.



Port	Description			
[IR / AMBIENT SENSOR IN]	Supplies power to the external sensor board or receives the light sensor signal			
[IR OUT]	Receives the input signal via the external sensor board and outputs the signal via LOOPOUT			
[AUDIO OUT]	Connects to the audio of a source device			
[RGB / DVI / DP / HDMI AUDIO IN]	Receives sound from a PC via an audio cable			
[USB ←←]	USB memory device port			
[AV IN / COMPONENT IN]	Connects to a source device using the AV/component adapter			
[DP IN]	Connects to a PC using a DP cable			
[HDMI IN]	Connects to a source device using an HDMI cable			
[DVI OUT (LOOPOUT)]	Connects to another product using a DVI cable			
[DVI IN]	Connects to a source device using a DVI cable or HDMI-DVI cable.			
[ANT IN]	Connects to a TV using an antenna cable			
[RGB IN]	Connects to a source device using the D-SUB cable.			
[RS232C IN/OUT]	Connects to MDC using an RS232C-stereo cable			
[RJ45]	Connects to MDC using a LAN cable			

#### Assembling the Holder-Wire stand





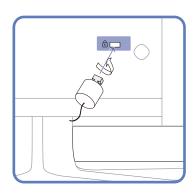
Stand: Sold separately

#### 1.2.3 Anti-theft Lock



- An anti-theft lock allows you to use the product securely even in public places.
- The locking device shape and locking method depend on the manufacturer. Refer to the user guide provided with your anti-theft locking device for details.

To lock an anti-theft locking device

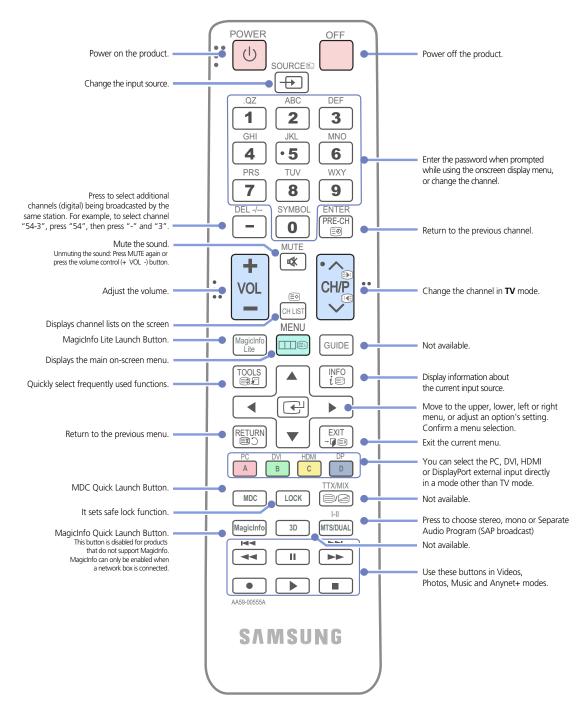


- 1 Fix the cable of your anti-theft locking device to a heavy object such as a desk.
- Put one end of the cable through the loop on the other end.
- 3 Insert the locking device into the anti-theft lock slot at the back of the product.
- 4 Lock the locking device.
  - An anti-theft locking device can be purchased separately.
  - Refer to the user guide provided with your anti-theft locking device for details.
  - Anti-theft locking devices can be purchased at electronics retailers or online.

#### 1.2.4 Remote Control



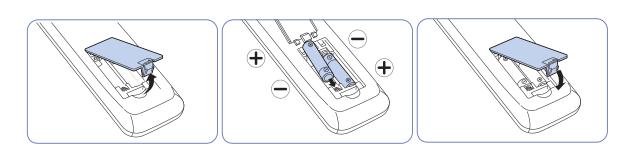
- Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.
- Remote control button functions may differ for different products.
- This is a special remote control for the visually impaired persons and has Braille points on the Power, Channel and Volume buttons.



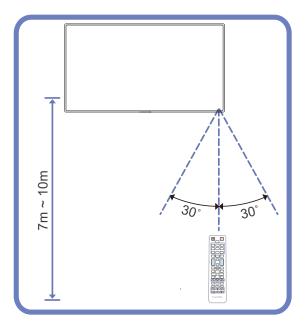
### Adjusting the OSD with the Remote Control

MENU	1.	Open the OSD menu.
	2.	Select from Picture, Sound, Media, Network, System or Support in the displayed OSD menu screen.
	3.	Change settings as desired.
	4.	Finish setting.
EXIT -@®	5.	Close the onscreen display (OSD) menu.

#### To place batteries in the remote control



#### **Remote Control Reception Range**



Use the remote control within 7m to 10m from the sensor on the product at an angle of 30° from the left and right.



- Store used batteries out of reach of children and recycle.
- Do not use a new and used battery together. Replace both batteries at the same time.
- Remove batteries when the remote control is not to be used for an extended period of time.

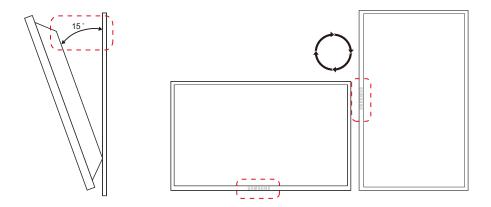
### 1.3 Before Installing the Product (Installation Guide)

- To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.
  - Ensure that an authorized installation company installs the wall mount.
  - Otherwise, it may fall and cause personal injury.
  - Make sure to install the specified wall mount.

#### 1.3.1 Tilting Angle and Rotation



Contact Samsung Customer Service Center for further details.



- A The product can be tilted at a maximum angle of 15° from a perpendicular wall surface.
- B To use the product vertically (portrait), turn it clockwise so that the LED is pointing down.

#### 1.3.2 Ventilation

#### 1. Installation on a Perpendicular Wall

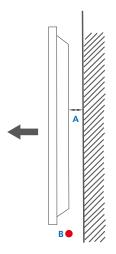


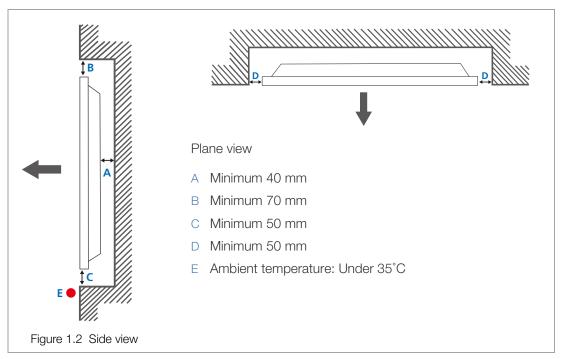
Figure 1.1 Side view

- A Minimum 40 mm
- B Ambient temperature: Under 35°C
- When installing the product on a perpendicular wall, allow at least 40 mm of space between the product and wall surface for ventilation and ensure that the ambient temperature is kept below 35°C.

#### 2. Installation on an Indented Wall

B

Contact Samsung Customer Service Center for further details.



When installing the product on an indented wall, allow at least the space specified above between the product and wall for ventilation and ensure that the ambient temperature is kept below 35°C.

#### 3. Installation in an Indented Floor

Contact Samsung Customer Service Center for further details.

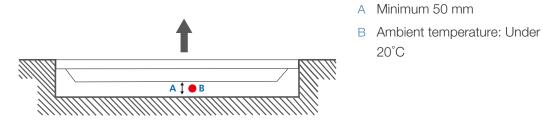
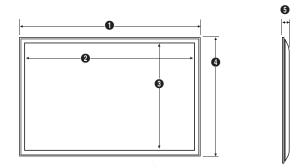


Figure 1.3 Side view

When installing the product in an indented floor, allow at least 50mm of space between the product and floor surface for ventilation and ensure that the ambient temperature is kept below 20°C.

### 1.4 Dimensions



(Unit: mm)

Model name	0	2	3	4	6
ME40A	920.0	885.6	498.2	534.5	29.9
ME46A	1055.2	1018.0	572.6	610.8	29.9
ME55A	1246.4	1209.6	680.4	718.2	29.9

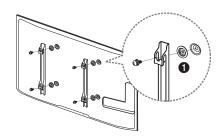


All drawings are not necessarily to scale. Some dimensions are subject to change without prior notice. Refer to the dimensions prior to performing installation of your product. Not responsible for typographical or printed errors.

### 1.5 Installing the Wall Mount

#### 1.5.1 Preparing before installing Wall-Mount

To install a wall-mount from another manufacturer, use the Holder-Ring.



#### 1.5.2 Installing the Wall Mount Kit

The wall mount kit (sold separately) allows you to mount the product on the wall.

For detailed information on installing the wall mount, see the instructions provided with the wall mount. We recommend you contact a technician for assistance when installing the wall mount bracket. Samsung Electronics is not responsible for any damage to the product or injury to yourself or others if you elect to install the wall mount on your own.

#### 1.5.3 Wall Mount Kit Specifications (VESA)



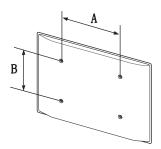
Install your wall mount on a solid wall perpendicular to the floor. Before attaching the wall mount to surfaces other than plaster board, please contact your nearest dealer for additional information. If you install the product on a ceiling or slanted wall, it may fall and result in severe personal injury.



- Standard dimensions for wall mount kits are shown in the table below.
- Samsung wall mount kits contain a detailed installation manual and all parts necessary for assembly are provided.
- Do not use screws that do not comply with the VESA standard screw specifications.
- Do not use screws that are longer than the standard length or do not comply with the VESA standard screw specifications.
   Screws that are too long may cause damage to the inside of the product.
- For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on the wall mount specifications.
- Do not fasten the screws too firmly. This may damage the product or cause the product to fall, leading to personal injury. Samsung is not liable for these kinds of accidents.
- Samsung is not liable for product damage or personal injury when a non-VESA or non-specified wall mount is used or the consumer fails to follow the product installation instructions.
- Do not mount the product at more than a 15 degree tilt.
- Always have two people mount the product on a wall.

Product size in inches	VESA screw hole specs (A * B) in millimeters	Standard Screw	Quantity
32~40	200 X 200	M8	4
46~55	400 X 400	IVIO	4



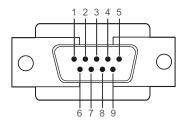


# 1.6 Remote Control (RS232C)

#### 1.6.1 Cable Connection

Interface	RS232C (9 pins)
Pin	TxD (No. 2), RxD (No. 3), GND (No. 5)
Bit rate	9600 bps
Data bits	8 bit
Parity	None
Stop bit	1 bit
Flow control	None
Maximum length	15m (only shielded type)

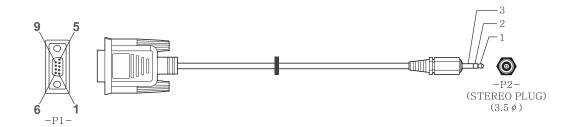
#### Pin assignment



Pin	Signal
1	Detect data carrier
2	Received data
3	Transmitted data
4	Prepare data terminal
5	Signal ground
6	Prepare data set
7	Send request
8	Clear to send
9	Ring indicator

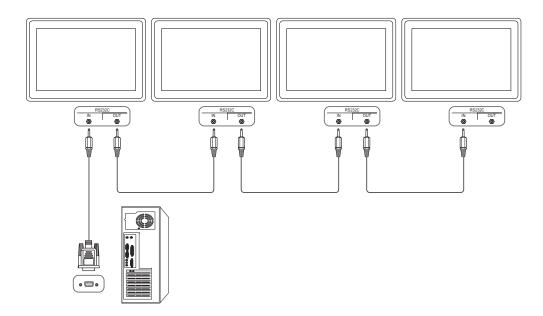
#### RS232C cable

Connector: 9-Pin D-Sub to Stereo Cable



-P1-		-P1-		-P2-		-P2-
Female	Rx	2	>	1	Tx	STEREO
	Tx	3	<	2	Rx	PLUG
	Gnd	5		3	Gnd	

#### Connection



#### 1.6.2 Control Codes

#### Viewing control state (Get control command)

Header	Command		Data length	
0xAA	Command type	ID	0	Checksum

#### Controlling (Set control command)

Header	Command		Data length	Data	
0xAA	Command type	ID	1	Value	Checksum

#### Command

No.	Command type	Command	Value range
1	Power control	0x11	0~1
2	Volume control	0x12	0~100
3	Input source control	0x14	-
4	Screen mode control	0x18	-
5	Screen size control	0x19	0~255
6	PIP on/off control	0x3C	0~1
7	Auto adjustment control	0x3D	0
8	Video wall mode control	0x5C	0~1
9	Safety Lock	0x5D	0~1

- Issued IDs can be displayed in hexadecimals. However, ID 0 must be displayed as 0xFF.
- All communications take place in hexadecimals. The checksum is calculated by adding up all values except the header. If a checksum adds up to be more than 2 digits as shown below (11+FF+01+01=112), the first digit is removed.

#### E.g. Power On & ID=0

Header	Command	ID	Data length	Data 1	Checksum
0xAA	0x11	U	1	"Power"	Onecksum

Header	Command	ID	Data length	Data 1	10	
0xAA	0x11	טו	1	1	12	

 To control all devices connected by a serial cable simultaneously irrespective of IDs, set the ID as "0xFE" and transmit commands. Commands will be executed by each device but ACK will not respond.

#### **Power control**

Function

A TV/monitor can be powered on and off using a PC.

• Viewing power state (Get Power ON / OFF Status)

Header	Command	ID	Data length	Checksum
0xAA	0x11	טו	0	Onecksum

Setting power ON/Off (Set Power ON / OFF)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x11	טו	1	"Power"	OHECKSUITI

"Power": Power code to be set on a TV/monitor

1: Power ON

0: Power OFF

Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'A'	0x11	"Power"	OHECKSUITI

<sup>&</sup>quot;Power": Power code to be set on a TV/monitor

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'N'	0x11	"ERR"	OHECKSUITI

<sup>&</sup>quot;ERR": A code showing what error has occurred

#### Volume control

Function

The volume of a TV/monitor can be adjusted using a PC.

Viewing volume state (Get Volume Status)

Header	Command	ID	Data length	Checksum
0xAA	0x12	טו	0	OHECKSUITI

• Setting the volume (Set Volume)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x12	טו	1	"Volume"	Offecksum

<sup>&</sup>quot;Volume": Volume value code to be set on a TV/monitor (0-100)

Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'A'	0x12	"Volume"	OHECKSUITI

<sup>&</sup>quot;Volume": Volume value code to be set on a TV/monitor (0-100)

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'N'	0x12	"ERR"	Offecksum

<sup>&</sup>quot;ERR": A code showing what error has occurred

#### Input source control

Function

The input source of a TV/monitor can be changed using a PC.

• Viewing input source state (Get Input Source Status)

Header	Command	ID	Data length	Checksum
0xAA	0x14	ID	0	OHECKSUITI

Setting the input source (Set Input Source)

Header	Command		Data length	Data	
0xAA	0x14	ID	1	"Input Source"	Checksum

<sup>&</sup>quot;Input Source": An input source code to be set on a TV/monitor

0x14	PC
0x1E	BNC
0x18	DVI
0x0C	Input source
0x04	S-video
0x08	Component
0x20	MagicInfo
0x1F	DVI_video
0x30	RF (TV)
0x40	DTV
0x21	HDMI1
0x22	HDMI1_PC
0x23	HDMI2
0x24	HDMI2_PC
0x25	DisplayPort

- !
- DVI\_video, HDMI1\_PC and HDMI2\_PC cannot be used with the Set command. They only respond to "Get" commands.
- This model does not support BNC, S-Video, HDMI1, HDMI1\_PC, HDMI2, HDMI2\_PC, and DisplayPort.
- MagicInfo is only available with models that contain the MagicInfo function.
- RF (TV) and DTV are only available with models that include a TV.

#### Ack

Не	eader	Command		Data length	Ack/Nak	r-CMD	Val1	
0	)xAA	0xFF	ID	3	'A'	0x14	"Input Source"	Checksum

<sup>&</sup>quot;Input Source": An input source code to be set on a TV/monitor

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'N'	0x14	"ERR"	OHECKSUITI

<sup>&</sup>quot;ERR": A code showing what error has occurred

#### Screen

Function

The screen mode of a TV/monitor can be changed using a PC.

Screen mode cannot be controlled when the Video Wall function is enabled.

- This control can only be used on models that include a TV.
- Viewing screen status (Get Screen Mode Status)

Header	Command	ID	Data length	Checksum
0xAA	0x18	טו	0	CHECKSUITI

Setting the picture size (Set Picture Size)

Header	Command		Data length	Data	
0xAA	0x18	ID	1	"Screen Mode"	Checksum

<sup>&</sup>quot;Screen Mode": A code that sets the TV/monitor status

0x01	16:9
0x04	Zoom
0x31	Wide Zoom
0x0B	4:3

Ack

I	Header	Command		Data length	Ack/Nak	r-CMD	Val1	
	0xAA	0xFF	ID	3	'A'	0x18	"Screen Mode"	Checksum

<sup>&</sup>quot;Screen Mode": A code that sets the TV/monitor status

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'N'	0x18	"ERR"	Offecksuffi

<sup>&</sup>quot;ERR": A code showing what error has occurred

#### Screen size control

Function

The screen size of a TV/monitor can be changed using a PC.

• Viewing the screen size (Get Screen Size Status)

Header	Command	ID	Data length	Checksum
0xAA	0x19	טו	0	OHECKSUITI

Ack

Header	Command		Data length	Ack/Nak	r-CMD	Val1	
0xAA	0xFF	ID	3	'A'	0x19	"Screen Size"	Checksum

<sup>&</sup>quot;Screen Size": TV/monitor screen size (range: 0 – 255, unit: inch)

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'N'	0x19	"ERR"	Offecksum

<sup>&</sup>quot;ERR": A code showing what error has occurred

#### PIP On/Off control

Function

The PIP mode of a TV/monitor can be turned on or off using a PC.



- Only available on models that have the PIP function.
- □ The mode cannot be controlled if Video Wall is set to On.
- This function is not available in MagicInfo.
- Viewing PIP on/off state (Get the PIP ON / OFF Status)

Header	Command	ID	Data length	Checksum
0xAA	0x3C	ID	0	OHECKSUITI

• Setting PIP on/off (Set the PIP ON / OFF)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x3C	- ID	1	"PIP"	Onecksum

"PIP": A code used to turn the PIP mode of a TV/monitor on or off

1: PIP ON

0: PIP OFF

Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'A'	0x3C	"PIP"	Offecksum

<sup>&</sup>quot;PIP": A code used to turn the PIP mode of a TV/monitor on or off

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'N'	0x3C	"ERR"	Offecksuffi

<sup>&</sup>quot;ERR": A code showing what error has occurred

### Auto adjustment control (PC and BNC only)

Function

Automatically adjust the PC system screen using a PC.

- Viewing auto adjustment state (Get Auto Adjustment Status)
- Setting auto adjustment (Set Auto Adjustment)

Header	Command		Data length	Data	
0xAA	0x3D	ID	1	"Auto Adjustment"	Checksum

<sup>&</sup>quot;Auto Adjustment" : 0x00 (at all times)

Ack

Header	Command		Data length	Ack/Nak	r-CMD	Val1	
0xAA	0xFF	ID	3	'A'	0x3D	"Auto Adjustment"	Checksum

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'N'	0x3D	"ERR"	Offecksuffi

<sup>&</sup>quot;ERR": A code showing what error has occurred

#### Video Wall Mode Control

Function

Video Wall Mode can be activated on a TV/monitor using a PC.

This control is only available on a TV/monitor whose Video Wall is enabled.

This function is not available in MagicInfo.

Viewing video wall mode (Get Video Wall Mode)

Header	Command	ID	Data length	Checksum
0xAA	0x5C	טו	0	OHECKSUITI

• Setting the video wall (Set Video Wall Mode)

Header	Command		Data length	Data	
0xAA	0x5C	ID	1	"Video Wall Mode"	Checksum

<sup>&</sup>quot;Video Wall Mode": A code used to activate Video Wall mode on a TV/monitor

1: Full

0: Natural

Ack

	Header	Command		Data length	Ack/Nak	r-CMD	Val1	
Ì	0xAA	0xFF	ID	3	'A'	0x5C	"Video Wall Mode"	Checksum

<sup>&</sup>quot;Video Wall Mode": A code used to activate Video Wall mode on a TV/monitor

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'N'	0x5C	"ERR"	Offecksuff

<sup>&</sup>quot;ERR": A code showing what error has occurred

### Safety Lock

Function

PC can be used to turn the **Safety Lock** function on or off on a TV/monitor.

This control is available regardless of whether or not the power is turned on.

• Viewing the safety lock state (Get Safety Lock Status)

Header	Command	ID	Data length	Checksum
0xAA	0x5D	ID	0	OHECKSUITI

Enabling or disabling safety lock (Set Safety Lock Enable / Disable)

Header	Command		Data length	Data	
0xAA	0x5D	ID	1	"Safety Lock"	Checksum

"Safety Lock": Safety lock code to be set on a TV/monitor

1: ON

0: OFF

Ack

Header	Command		Data length	Ack/Nak	r-CMD	Val1	
0xAA	0xFF	ID	3	'A'	0x5D	"Safety Lock"	Checksum

<sup>&</sup>quot;Safety Lock": Safety lock code to be set on a TV/monitor

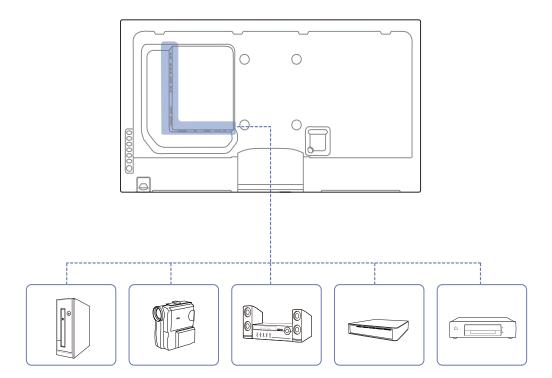
Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF	טו	3	'N'	0x5D	"ERR"	OHECKSUITI

<sup>&</sup>quot;ERR": A code showing what error has occurred

### 2.1 Before Connecting

Check the following before you connect this product with other devices.

Devices that can be connected to this product include PCs, camcorders, speakers, set top boxes and DVD/Blu-ray Disc players.



#### 2.1.1 Pre-connection Checkpoints

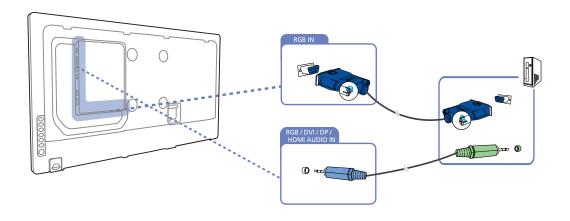
- Before connecting a source device, read the user manual provided with it. The number and locations
  of ports on source devices may differ from device to device.
- Do not connect the power cable until all connections are completed. Connecting the power cable during connection may damage the product.
- Connect the sound ports correctly: left = white and right = red.
- Check the types of ports at the back of the product you want to connect.

### 2.2 Connecting and Using a PC

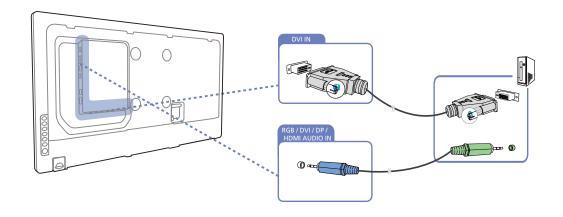
### 2.2.1 Connecting to a PC

- A PC can be connected to the product in a variety of ways.
   Select a connection method suitable for your PC.
- After connecting the PC, connect the power cable.
  - Connecting parts may differ in different products.

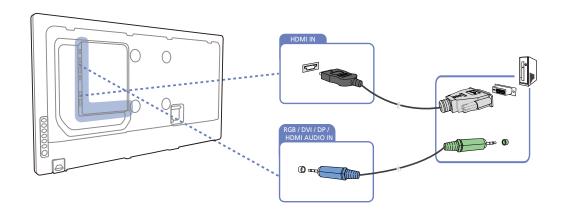
#### Connection using the D-SUB cable (analog type)



#### Connection using a DVI cable (digital type)



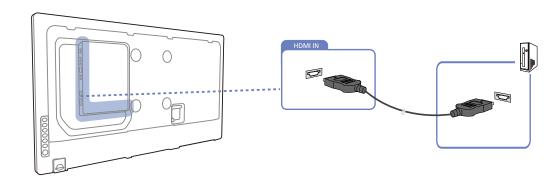
### Connection Using an HDMI-DVI Cable



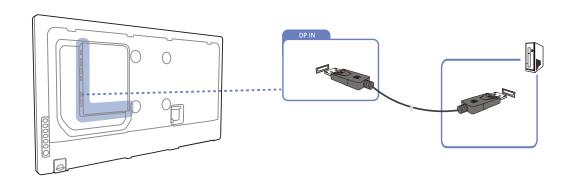
\_K

When you connect a PC to the product using an HDMI-DVI cable, set **Edit Name** to **DVI PC** to access video and audio content stored on the PC.

### Connection Using an HDMI Cable



### Connection Using an DP Cable



#### 2.2.2 Changing the Resolution



Adjust the resolution and refresh rate in Control Panel on your PC to obtain optimum picture quality.

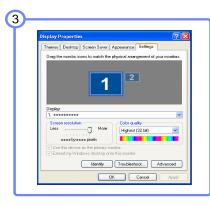
The picture quality of TFT-LCDs may degrade if the optimum resolution is not selected.

Changing the Resolution on Windows XP

Go to Control Panel  $\rightarrow$  Display  $\rightarrow$  Settings, and change the resolution.







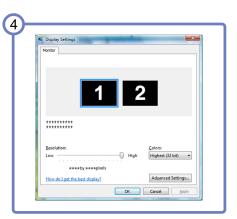
Changing the Resolution on Windows Vista

Go to Control Panel  $\rightarrow$  Personal Settings  $\rightarrow$  Display Settings, and change the resolution.







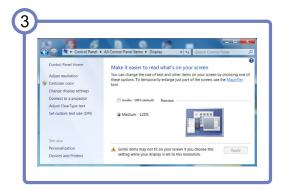


Changing the Resolution on Windows 7

Go to Control Panel  $\rightarrow$  Display  $\rightarrow$  Screen Resolution, and change the resolution.









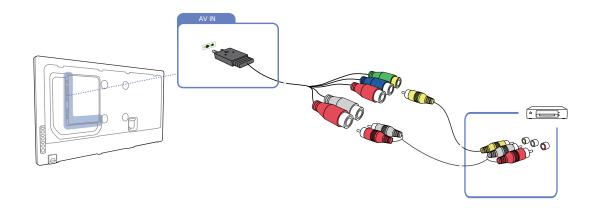
### 2.3 Connecting to a Video Device

• You can connect a video device to the product using a cable.

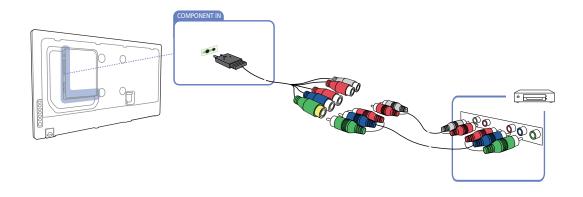


- Connecting parts may differ in different products.
- After connecting a source device, press the **SOURCE** button on the remote control and select the connected source device.

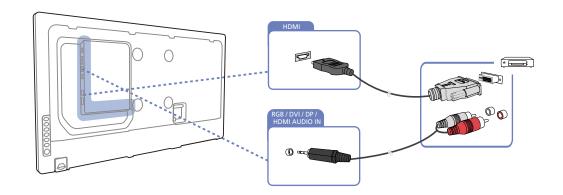
### 2.3.1 Connection Using the AV Cable



### 2.3.2 Connection Using the Component Cable



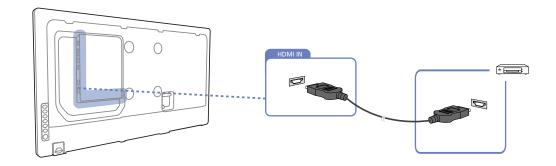
### 2.3.3 Connection Using an HDMI-DVI Cable





- Audio will not be enabled if the product is connected to a video device using an HDMI-DVI cable.
   To resolve this, additionally connect an audio cable to the audio ports on the product and video device.
- Supported resolutions include 1080p (50/60Hz), 720p (50/60Hz), 480p, and 576p.

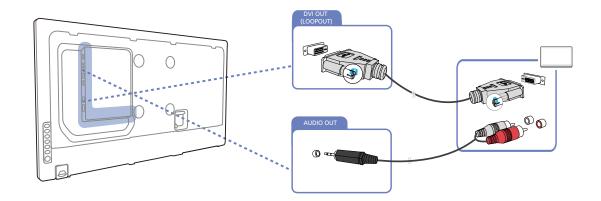
#### 2.3.4 Connection Using an HDMI Cable



#### Using an HDMI cable or HDMI to DVI Cable (up to 1080p)

- For better picture and audio quality, connect to a digital device using an HDMI cable.
- An HDMI cable supports digital video and audio signals, and does not require an audio cable.
  - To connect the TV to a digital device that does not support HDMI output, use an HDMI/DVI and audio cables.
- The picture may not display normally (if at all) or the audio may not work if an external device that uses an older version of HDMI mode is connected to the TV. If such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade.
- Be sure to use an HDMI cable with a thickness of 14 mm or less.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- A basic high-speed HDMI cable or one with ethernet is recommended. This product does not support the ethernet function via HDMI.

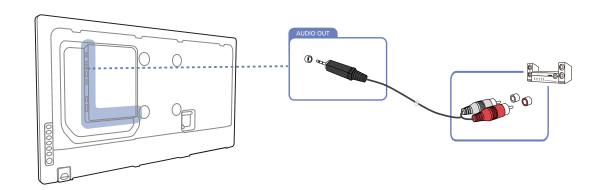
#### 2.3.5 Connecting an External Monitor



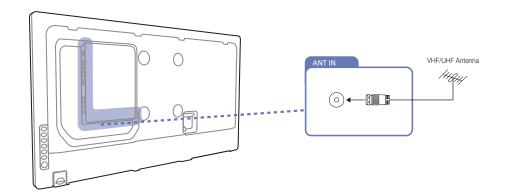


- The Loopout function can be used to duplicate the screen of the primary display. Connect [DVI OUT] on the primary display to [DVI IN] or [HDMI] on another display.
- Up to HD resolution can be supported. Compatible input sources include DVI IN, DP IN and HDMI IN. However, up to 10 monitors can be connected in Full HD mode depending on the type of cable or signal equipment. Multiple monitors that are daisy-chained have a limit to the connectable monitors.
- The [DVI OUT] port on this product does not support the HDCP input.
- If the stereo cable is connected to the [AUDIO OUT] port on the primary monitor, the sound from the primary monitor will be muted.

### 2.3.6 Connecting to an Audio System



### 2.3.7 Connecting to an Antenna



### 2.4 Changing the Input source

#### 2.4.1 Source



**Source** allows you to select a variety of sources and change source device names.

#### Source

You can display the screen of a source device connected to the product. Select a source from Source List to display the screen of the selected source.



Refer to page 135 for details about the Source menu.

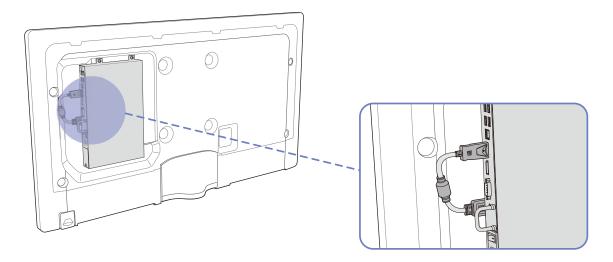


The displayed image may differ depending on the model.



The screen may not display correctly if an incorrect source is selected for the source device you want to convert to.

### 2.5 Connecting the network box



Connect the DP-HDMI cable to the [HDMI] port on the product and the [MAGICINFO] port on the network box.



For details on how to connect to a network box, refer to the user's manual provided with the network box upon purchase.

#### 2.5.1 MagicInfo

To use MagicInfo, a network box (sold separately) must be connected to the product.



- To change the MagicInfo settings, run "MagicinfoSetupWizard" on the desktop.
- For details on how to use MagicInfo, refer to the DVD provided with the network box.
- The information in this section is subject to change without notice for quality improvement.
- If a problem occurs after installing an operating system other than the one provided with the network box, restoring the previous version of the operating system, or installing software that is not compatible with the operating system provided, you will not be able to benefit from technical support and will be charged a fee for a visit from a service technician. A product exchange or refund will also not be available.

#### **Entering MagicInfo mode**

- After installing and connecting the network box (sold separately) to the product, power on the product.
- Press SOURCE on the remote control, and select MagicInfo.



Connecting the network box to the HDMI port on the product will change **Source** from **HDMI** to **MagicInfo**.

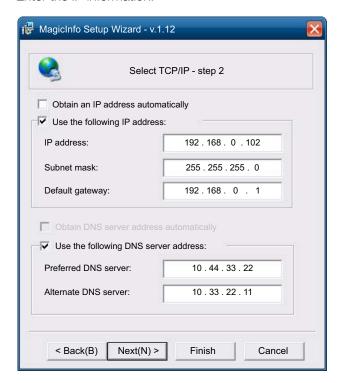
2

### Connecting and Using a Source Device

3 Select the default application you want to run when MagicInfo starts.



4 Enter the IP information.



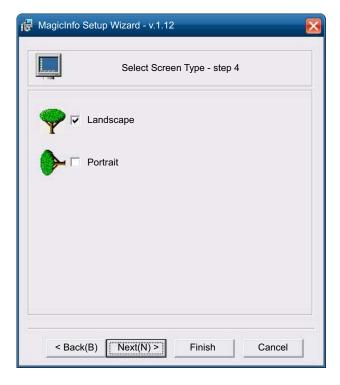
2

# Connecting and Using a Source Device

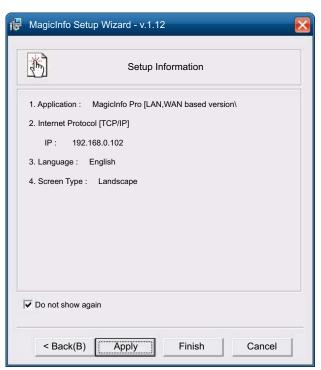
5 Select a language. (The default language is English.)



Select a display mode.



7 Double-check the settings you have just configured.





- If the execution icon does not appear, double-click the **MagicInfo** icon on the desktop. The icon will appear at the bottom right of the screen.
- For further details on how to use **MagicInfo**, refer to the MagicInfo Lite Edition software CD provided with the network box.

3

### **Using MDC**

MDC (Multiple Display Control) is an application that allows you to easily control multiple display devices simultaneously using a PC.

### 3.1 Configuring Settings for Multi Control



Assign an individual ID to your product.

#### 3.1.1 Configuring settings for Multi Control

#### MDC Connection

Select a method to connect to MDC to receive the MDC signal.

RS232C MDC

Communicate with MDC via the RS232C-stereo cable.

RJ45 MDC

Communicate with MDC via the RJ45 cable.

ID Setup

Assign an ID to a set. (Range: 0~99)

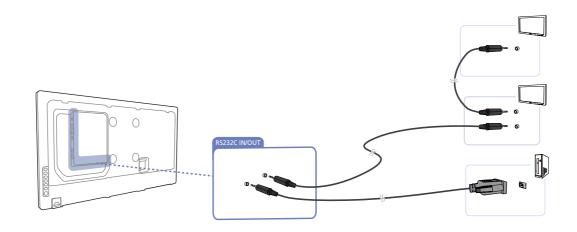
Press ▲ or ▼ to select a number, and press [◄].

ID Input

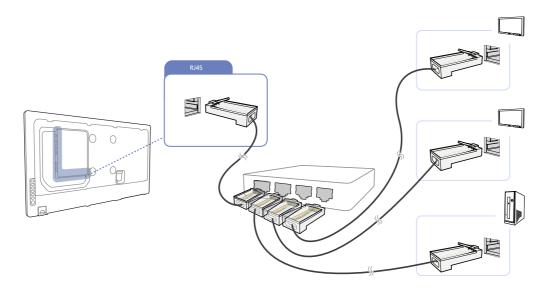
Enter the ID number of the product connected to the input cable for input signal reception.

Enter the number you want using the number buttons on the remote control.

### 3.2 Connection Using an RS232C-stereo Cable



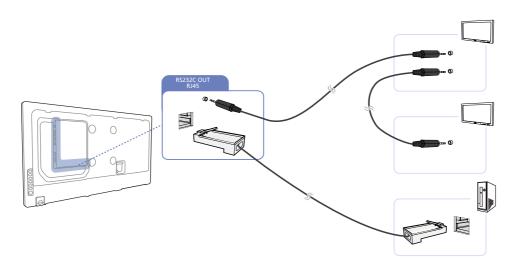
### 3.3 Connection Using a LAN Cable



B

Multiple products can be connected using the [RJ45] port on the product and the LAN ports on the HUB.

### 3.4 Connection Using the RS232C-stereo and LAN Cables



\_R

Multiple products can be connected using the [RS232C IN / OUT] port on the product.

### 3.5 MDC Program Installation/Uninstallation

#### 3.5.1 Installation

- 1 Insert the installation CD into the CD-ROM drive.
- 2 Click the **MDC Unified** installation program.
  - If a software installation window is not displayed on the main screen, install with the **MDC Unified** execution file in the MDC folder on the CD.
- 3 Click "Next" in the displayed Installation Wizard screen.
- 4 In the "License Agreement" window displayed, select "I accept the terms in the license agreement" and click "Next".
- 5 In the displayed "Customer Information" window, fill out all the information fields and click "Next".
- 6 In the displayed "Destination Folder" window, select the directory path you want to install the program in and click "Next".
  - If the directory path is not specified, the program will be installed in the default directory path.
- In the displayed "Ready to Install the Program" window, check the directory path to install the program in and click "Install".
- 8 Installation progress will be displayed.
- 9 Click "Finish" in the displayed "InstallShield Wizard Complete" window.
  - Select "Launch MDC Unified" and click "Finish" to run the MDC program immediately.
- 10 The MDC Unified shortcut icon will be created on the desktop after installation.



- The MDC execution icon may not be displayed depending on the PC system or product specifications.
- Press F5 if the execution icon is not displayed.

#### 3.5.2 Uninstallation

- 1 Select Settings > Control Panel on the Start menu and double-click Add/Delete Program.
- 2 Select MDC Unified from the list and click Change/Remove.
- MDC installation can be affected by the graphics card, mother board and network conditions.

### What is MDC?

Multiple display control "MDC" is an application that allows you to easily control multiple display devices simultaneously using a PC.

### 4.1 Connecting to MDC

### 4.1.1 Using MDC via RS-232C (serial data communications standards)

An RS-232C serial cable must be connected to the serial ports on the PC and monitor.

### 4.1.2 Using MDC via Ethernet

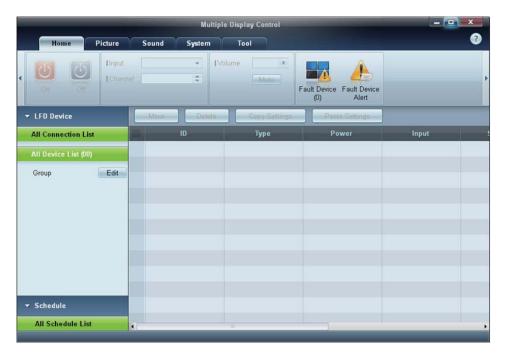
Enter the IP for the primary display device and connect the device to the PC. One display device can connect to another using an RS-232C serial cable.

### 4.2 Connection Management

Connection management includes the **Connection list** and **Connection list modification options**.

Connection list - Connection list shows the details of the connections such as connection setting (IP/COM, Port No, MAC, and Connection Type), connection status, Set ID Range, and detected devices. Each connection can contain a maximum of 100 devices connected in serial daisy-chain fashion. All the LFDs detected in a connection are displayed in the Device list, where the user can make groups and send commands to detected devices.

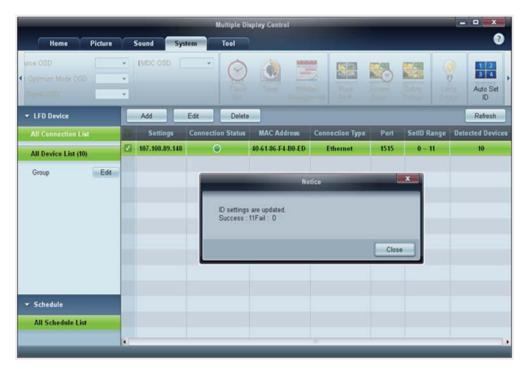
Connection list modification options - Connection modification options includes Add, Edit, Delete, and Refresh.



### What is MDC?

### 4.3 Auto Set ID

**Auto Set ID** feature assigns a Set ID for all the LFDs connected in daisy-chain of a selected connection. There can be a maximum of 100 LFDs in a connection. The Set ID is assigned sequentially in the daisy-chain running from 1 to 99, and then finally to Set ID 0.



# 4.4 Cloning

Using the Cloning feature, you can copy the setting of one LFD and apply it to multiple selected LFDs. You can select specific tab categories or all tab categories for cloning, using the copy setting option window.



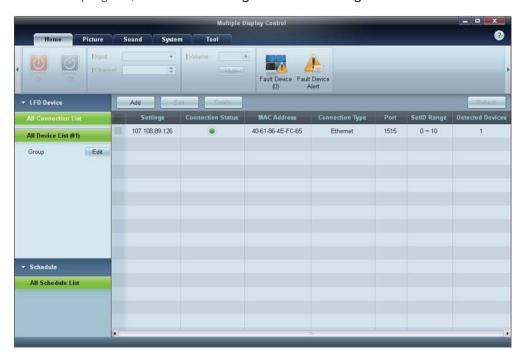
# 4.5 Command Retry

This feature is used to specify the maximum number of times the MDC command will be retried in case of there being no reply or a corrupted reply from an LFD. The retry count value can be set using the MDC options window. The retry count value must be between 1-10. The default value is 1.

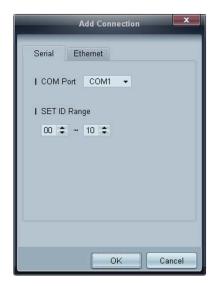


# 4.6 Getting Started with MDC

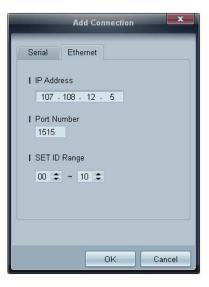
1 To start the program, click Start  $\rightarrow$  Programs  $\rightarrow$  Samsung  $\rightarrow$  MDC Unified.



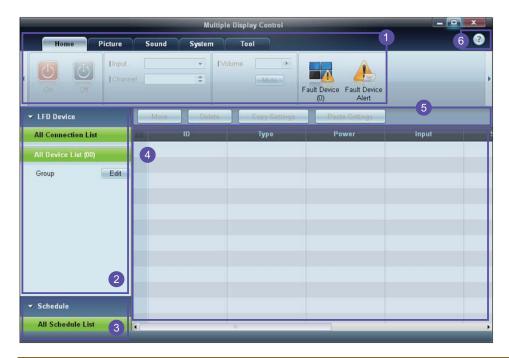
- Click Add to add a display device.
  - If the connection is established via RS232C, go to Serial and specify the COM Port.



• If the connection is established via **Ethernet**, enter the IP that was entered for the display device.



# 4.7 Main Screen Layout



1 Menu Bar	Change the status of a display device or the properties of the program.	
2 Device Category	View a list of connected display devices or device groups.	
3 Schedule Category	View a list of schedules for display devices.	
4 Set List	Select the display device you want to adjust.	
5 Modify the Set List	Add, edit, regroup or delete sets.	
6 Help Topics	Display help topics for the program.	

### 4.8 Menus

You can power on or off a selected device or change the input source or volume of the device.

Choose display devices from the list of sets, and select the **Home** tab.



### 4.8.1 **1** Home

Select an item and change the corresponding setting.

#### Power

- On: Power on a selected display.
- Off: Power off a selected display.

#### Input

• Input Source: Change the input source.



- Input sources available can vary depending on the Display Device Models.
- The input source can be changed only for displays that are turned on.
- Channel: Change the channel.



- The TV channel can be changed by using the up/down arrow keys.
- The channel can be changed only when the input source is **TV**.
- Only registered channels can be selected.

#### 4.8.2 2 Volume



The volume can be changed or the sound can be muted only for displays that are turned on.

#### Volume

The volume can be adjusted using the slider bar in the range of 0 to 100. Adjust the volume of a selected display.

#### Input

Enable or disable Mute for a selected display.

**Mute** will automatically be disabled if **Volume** is adjusted when **Mute** is on.

### 4.8.3 3 Alert

#### Fault Device

This menu shows a list of display devices which have following errors - fan error, temperature error, brightness sensor error, or lamp error.

Select a display device from the list. The **Repair** button will be enabled. Click the refresh button to refresh the error status of the display device. The recovered display device will disappear from the **Fault Device List**.

#### Fault Device Alert

Display device in which error is detected will be reported by email.

Fill in all required fields. The **Test** and **OK** buttons will be enabled. Ensure the **Sender** information and at least one **Recipient** are entered.

### 4.9 Screen Adjustment

The screen settings (contrast, brightness, etc.) can be adjusted.

Choose display devices from the list of sets, and select the **Picture** tab.

#### 4.9.1 Custom

Select an item and change the corresponding screen setting.





- Color and Tint are not available if the input source is PC.
- Red, Green, Blue and PC Screen Adjustment are not available if the input source is Video.
- Color, Tint, Color Tone, Color Temp, Red, Green, Blue and PC Screen Adjustment are not available if both PC Source and Video Source are selected.

### Contrast

Adjust the contrast for the selected display device.

#### **Brightness**

Adjust the brightness for the selected display device.

#### Color

Adjust the colors for the selected display device.

### Tint (G/R)

Adjust the tint for the selected display device.

#### **Color Tone**

Adjust the background color tone for the selected display device.

#### **Color Temp**

• Adjust the color temperature for the selected display device.



This option is enabled if **Color Tone** is set to **Off**.

### Red

• Customize the intensity of red color for the selected display device.

#### Green

• Customize the intensity of green color for the selected display device.

### Blue

• Customize the intensity of blue color for the selected display device.

### 4.9.2 Options



### **Dynamic Contrast**

Adjust the **Dynamic Contrast** for the selected display device.

#### **Gamma Control**

Change the gamma value for the selected display.

#### **Auto Motion Plus**

This option is used to view dynamic images.

- Off: Disable the Auto Motion Plus function.
- Clear: Set the level of Auto Motion Plus to clear. This mode is suitable to display vivid images.
- Standard: Set the level of Auto Motion Plus to standard.
- **Smooth**: Set the level of **Auto Motion Plus** to smooth. This mode is suitable to display smooth images.
- **Custom**: Customize the level of screen burn-in or flickering.
- **Demo**: This function demonstrates the technology of **Auto Motion Plus**. The result when the mode is changed can be previewed on the left side of the window.

#### **Brightness Sensor**

Enable or disable the **Brightness Sensor** for the selected display device.

The **Brightness Sensor** detects the ambient light intensity and automatically adjusts the screen brightness.



**Brightness Sensor** may not be available depending on the product.

#### 4.9.3 Size



#### **Picture Size**

Adjust the screen size for the selected display device.

The **Detail** item will be disabled if **Picture Size** is set to a mode that does not support detailed configuration.

The -/+ buttons can be used to adjust **Zoom**.

The screen can be relocated using the up/down/left/right buttons.

#### Detail

You can view details of the selected screen size.

#### PC Screen Adjustment

Frequency adjustment or fine-tuning is available by using the -/+ buttons in **Coarse** or **Fine**.

To relocate the screen, click one of the four images below **Position**.

To automatically adjust the frequency, fine-tune or relocate the screen, click **Auto Adjustment**.

# 4.10 Sound Adjustment

You can change the sound settings.

Choose display devices from the list of sets, and select the **Sound** tab.





The Bass or Treble item will be disabled if the item is not supported by the selected set.

### 4.10.1 Bass

Adjust the bass for the selected display.

#### 4.10.2 Treble

Adjust the treble for the selected display.

### 4.10.3 Balance (L/R)

Adjust the volume of the left and right speakers of the selected display device.

#### 4.10.4 SRS TS XT

Enable or disable the SRS TS XT effect for the selected display device.

# 4.11 System Setup

Choose display devices from the list of sets, and select the **System** tab.

#### 4.11.1 Video Wall

The Video Wall function can be used to display part of a whole picture or repeat the same picture on each of connected multiple display devices.

Video Wall is enabled only when devices are in the group.

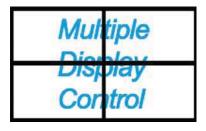


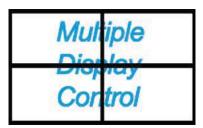
#### Video Wall

Enable or disable Video Wall.

### **Format**

Select the format to display the split screen.









Full

Natural

#### н

Select the number of horizontal display devices.

A maximum of 15 displays can be arranged in a row.



A maximum of 6 can be assigned to V if 15 is assigned to H.

#### ٧

Select the number of vertical display devices.

A maximum of 15 displays can be arranged in a row.



A maximum of 6 can be assigned to V if 15 is assigned to H.

#### **Screen Position**

View the layout of displays (configured by the screen divider) or change the layout as required.

Screen Position and Preview are enabled when Video Wall is set to on.

Note that if multiple sets are selected, **Preview** is enabled only if the settings for H and V match the layout of the selected sets.

To change the **Position**, select a set and drag it to a new position.



The range of screen divider settings may differ depending on the model.

#### 4.11.2 PIP

Basic information required to adjust **PIP** will appear in the menu screen.



- PIP will be disabled when Video Wall is ON.
- Note that **Picture Size** is disabled when **PIP** is **ON**.



#### **PIP Size**

View the **PIP Size** of the current display.

#### **PIP Source**

Select a PIP input source.

#### **Sound Select**

Select and enable the sound from either the primary screen or secondary screen.

### Channel

The channel can be changed if PIP Source is TV.

#### 4.11.3 General



#### **User Auto Color**

Automatically adjust the screen colors.



Available only in **PC** mode.

#### **Auto Power**

Set the product to automatically power on.

### **Standby Control**

Set the standby mode to activate if an input source is not detected.

### 4.11.4 Fan & Temperature



Configure the settings required to detect the fan speed and internal temperature for the product's protection.

#### **Fan Control**

Select a method to configure the fan speed.

### Fan Speed

Configure the fan speed.

#### **Temperature**

Detect the internal temperature by specifying the range of temperature.

### **4.11.5** Security



#### Safety Lock

Lock the on-screen menus.



To unlock the menus, set **Safety Lock** to **Off**.

#### **Button Lock**

Lock the buttons on the display device.



To unlock the buttons, set **Button Lock** to **Off**.

### 4.11.6 OSD Display



#### Source OSD

Select whether to display a message when the **Source** is changed.

#### Not Optimum Mode OSD

Select whether to display a message when a non-compatible mode is selected.

#### No Signal OSD

Select whether to display a message when there is no input signal.

#### MDC OSD

Select whether to display a message when settings are changed by the MDC.

#### 4.11.7 Time



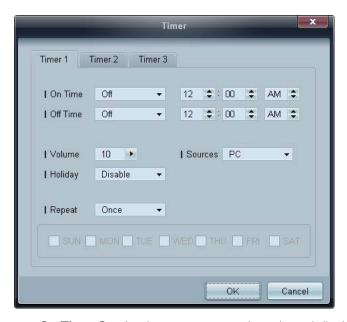
#### **Clock Set**



Change the current time on the selected display device according to the time set on a PC.

If the time is not set on the display device, null values will be displayed.

#### **Timer**



- On Time: Set the time to power on the selected display device.
- Off Time: Set the time to power off the selected display device.
- Volume: Specify the volume of the display device when it is powered on by On Time.
- Source: Specify the input source of the display device when it is powered on by On Time.
- Holiday: The Holiday Management settings can be applied to the Timer.

- Repeat: Specify the period for which you want to repeat the selected Timer.
  - Once: Activate the timer only one time.
  - EveryDay: Activate the timer every day.
  - Mon~Fri: Activate the timer from Monday through Friday.
  - Mon~Sat: Activate the timer on Saturdays and Sundays.
  - Manual: Customize days of the week.
  - The checkboxes to select days of the week below **Repeat** are enabled only if **Manual** is selected.

### **Holiday Management**

**Holiday Management** allows you to prevent devices that are set to be powered on by the **Timer** from turning on at a specified date.



The Holiday Management function can be enabled or disabled in the Timer settings menu.



Add: You can specify holidays:

Click the Add button in the Holiday Management window.



- Delete: Delete holidays. check the corresponding checkboxes and click this button.
- List of holidays: View a list of holidays you have added.

#### 4.11.8 Screen Burn Protection



#### **Pixel Shift**



Move the screen slightly at specified time intervals to prevent screen burn-in.

#### **Screen Saver**



This function prevents screen burn-in when the screen of the selected display device is left idle for an extended period of time.

- Interval: Set the interval to activate the Screen Saver.
- Mode: The Time setting can vary for each Mode.

### Safety Screen



The **Safety Screen** function can be used to prevent screen burn-in when a stationary image displays on the screen of a display device for an extended period of time.

#### **Lamp Control**

Lamp Control is used to adjust the backlight to reduce power consumption.



Automatically adjust the backlight of the selected display device at a specified time.

If Manual Lamp Control is adjusted, Auto Lamp Control will automatically switch to Off.

Manually adjust the backlight for the selected display.

If Auto Lamp Control is adjusted, Manual Lamp Control will automatically switch to Off.

• Ambient Light: Ambient Light detects ambient light intensity and automatically adjusts the screen brightness of all the LFDs in the same serial chain.

# 4.12 Tool Settings



### 4.12.1 **1** Security

#### **Panel Control**

Turn on or off the screen of a display device.

#### **Remote Control**

Enable or disable the remote control.

### 4.12.2 **2** Reset

#### **Reset Picture**

Reset the screen settings.

#### **Reset Sound**

Reset the sound settings.

### **Reset System**

Reset the system settings.

### **Reset All**

Reset the screen, sound and system settings at the same time.

### 4.12.3 3 Edit Column



Select the items you want to display in the list of sets.

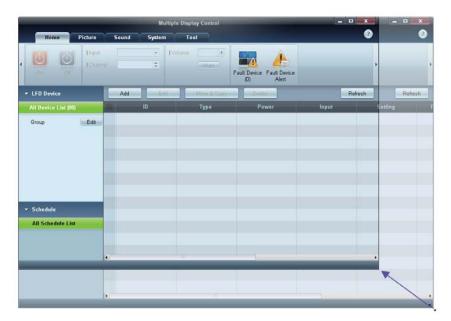
### 4.12.4 4 Information

View the program information.

### 4.13 Other Functions

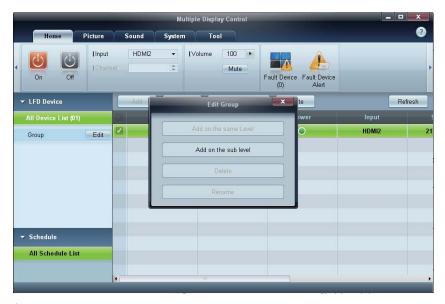
### 4.13.1 Resizing a Window

Place the mouse pointer on a corner of the program window. An arrow will appear. Move the arrow to customize the size of the program window.



### 4.13.2 Group Management

#### **Creating Groups**



Create groups and manage the list of sets on a group basis.

- Duplicate group names cannot be used.
- 1 Right-click and select Group → Edit in the display device list section on the left side of the program window.
- 2 In the Edit Group window displayed, click Add on the same level or Add on the sub level.
  - Add on the same level: Create a group on the same level as the selected group.



The **Add on the same level** button is enabled only if at least one group is created.

• Add on the sub level: Create a sub-group under the selected group.



3 Enter the group name.

### **Deleting Groups**

- 1 Select a group name, and click Edit.
- 2 In the Edit Group window displayed, click Delete.



3 Click **Yes**. The group will be deleted.

### **Renaming Groups**

- 1 Select a group name, and click Edit.
- 2 In the **Edit Group** window displayed, click **Rename**.



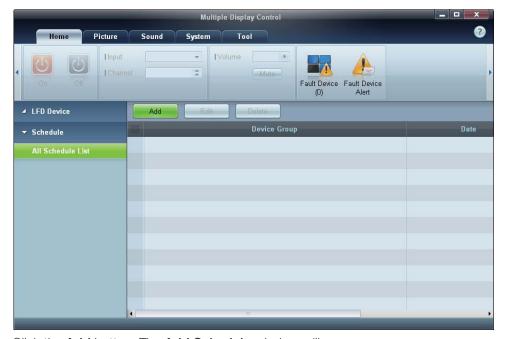
3 If a cursor appears in the old group name, enter a new group name.

### 4.13.3 Schedule Management

### **Creating Schedules**

Create and register a schedule on a group basis.

1 Click **All Schedule List** in the schedule section on the left side of the program window. The **Add** button will be enabled in the middle.



Click the Add button. The Add Schedule window will appear.



3 Click **Add** below the **Device Group** item, and select the group you want to add a schedule to.



- Select Date&Time/Action and click OK. The schedule will be added and a list of schedules will appear in the set list window.
  - Device Group: Select a group.
  - Date&Time
    - Instant Execution: Run the schedule immediately.
    - **Timer**: Set the date, time and interval to run the schedule.
  - Action: Select a function that will activate at the specified time and interval.

### **Schedule Modification**

To modify a schedule, select the schedule and click Edit.

#### Deleting a Schedule

To delete a schedule, select the schedule and click **Delete**.

# 4.14 Troubleshooting Guide

Issue		Solution		
The display you want to control does not appear on the system		Check the connection of the RS232C cable (check that the cable is properly connected to appropriate serial port).		
information chart.	2.	Check that another display with a duplicate ID is not connected. Connecting displays with a duplicate ID can cause the displays not to be shown due to data collision.		
	3.	Check that the display <b>ID</b> is within the range of 0 and 99. (Change the ID using the Display menu.)		
		For a display that supports the ID in a range of 0 to 99, the ID should be set between 0 and 99.		
The display you want to control does not appear on the other Control Info Grids.		Check that the display is powered on. (See the power status in the system information chart.)		
		Ensure you select the input source the display is connected to.		
The following message appears repeatedly.	Check that the display you want to control is selected.			
Please make selection in the information grid before controlling.  OK    Please make selection in the example				
Displays power on or off at different time from one another even though On Time or Off Time is set.	-	ust the time on the PC to synchronize the time between the nnected displays.		
The remote control does not work.	The remote control may not work if the RS-232C cable is removed or the program is closed abnormally while the <b>Remote Control</b> function is <b>Disable</b> . To resolve this, run the program again and set <b>Remote Control</b> to <b>Enable</b> .			



This program may malfunction sometimes due to a communication problem between the PC and display or electromagnetic waves emitted from nearby electronic devices.

### 4.14.1 How display properties are shown when multiple displays are used

- 1 When no display is selected: The default value is displayed.
- 2 When one display is selected: Settings for the selected display are displayed.
- 3 When two displays are selected (e.g. in sequence of ID 1 and ID 3): The settings for ID 1 are displayed before the settings for ID 3.
- 4 When the All+Select checkbox is checked and all displays are selected: The default settings are displayed.

Configure the Picture settings (Brightness, Color Tone, etc.).

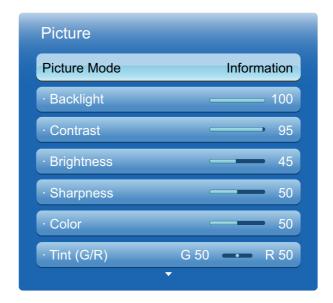


The layout of the Picture menu options may vary depending on the product.

### 5.1 Picture Mode



Select a picture mode (**Picture Mode**) suitable for the environment where the product will be used. Different **Picture Mode** options are displayed depending on the current input source.



The displayed image may differ depending on the model.

### 5.1.1 If the input source is PC, DVI or DisplayPort

- Information: This mode reduces eye fatigue and is suitable for displaying information to the public.
- Advertisement: This mode is suitable for displaying video content and indoor/outdoor advertisements.

### 5.1.2 If the input source is AV, Component, HDMI or TV

- Dynamic: This mode is suitable when the ambient light is bright.
- Standard: This mode is generally suitable for any environment.
- Natural: Suitable for reducing eye strain.
- Movie: This mode reduces eye fatigue.

# 5.2 Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R)



Your monitor has several options for adjusting picture quality. Select an option using the  $\blacktriangle$  and  $\blacktriangledown$  arrow keys, and then press [ $\blacksquare$ ]. Use the arrow keys to adjust the option value or select an option setting. When done, press [ $\blacksquare$ ].



- When you make changes to Backlight, Contrast, Brightness, Sharpness, Color or Tint (G/R), the OSD will be adjusted accordingly.
- When connecting a **PC**, you can only make changes to **Backlight**, **Contrast**, **Brightness**, and **Sharpness**.
- You can adjust and store Settings for each external device connected to the product.
- Lowering picture brightness reduces power consumption.

### 5.3 Screen Adjustment



Screen Adjustment provides various picture size and aspect ratio options. Select an option using the ▲ and ▼ arrow keys, and the press [◄]. Use the arrow keys to select an option in the sub-menu, and then press [◄].

Different Screen Adjustment options are displayed depending on the current input source.



The displayed image may differ depending on the model.

#### 5.3.1 Picture Size

If you have a cable box or satellite receiver, it may have its own set of screen sizes as well. However, we highly recommend you use your product's 16:9 mode most of the time.

- 16:9: Sets the picture to 16:9 wide mode.
- Zoom1: Use for moderate magnification. Cuts off the top and sides.
- Zoom2: Use for a stronger magnification.
- Smart View 1: Reduces the 16:9 picture by 50%.



- Smart View 1 is enabled only in HDMI mode.
- The picture size can vary depending on the input resolution when you play content from **Videos** in **Media**.
- Smart View 2: Reduces the 16:9 picture by 25%.



- Smart View 2 is enabled only in HDMI mode.
- The picture size can vary depending on the input resolution when you play content from **Videos** in **Media**.

- Wide Fit: Enlarges the aspect ratio of the picture to fit the entire screen.
- 4:3: Sets the picture to basic (4:3) mode.



Do not set your product to 4:3 format for a long time. The borders displayed on the left and right, or top and bottom of the screen may cause image retention (screen burn) which is not covered by the warranty.

- Screen Fit: Displays the full image without any cut-off when HDMI (720p / 1080i / 1080p) or Component (1080i / 1080p) signals are inputted.
- Custom: Changes the resolution to suit the user's preferences.



You can adjust and store settings for each external device you have connected to an input on the product.

### Picture Sizes available by Input Source.

Input Source	Picture Size
ATV	16:9, Zoom1, Zoom2, 4:3
AV, Component (480i, 480p)	16:9, Zoom1, Zoom2, 4:3, Custom
DTV (1080i)	16:9, 4:3, Smart View 2, Wide Fit, Screen Fit
Component (1080i, 1080p)	16:9, 4:3, Wide Fit, Screen Fit, Custom
HDMI (720p, 1080i, 1080p)	16:9, 4:3, Wide Fit, Screen Fit, Smart View 1, Smart View 2, Custom
PC, DVI, DP, HDMI (when a PC is connected)	16:9, 4:3

#### 5.3.2 Position

Adjusts the picture position. Position is only available if Picture Size is set to Zoom1, Zoom2, Wide Fit, or Screen fit or Custom.

- To use the **Position** function after selecting **Zoom1**, **Zoom2** or **Wide Fit**, follow these steps.
- 1 Press the ▼ button to select Position.
- 2 Press the [] button.
- 3 Press the ▲ or ▼ button to move the picture up or down.
- 4 Press the [] button.
- 5 Select Close by pressing the ▲ and ▼ buttons sequentially. To reset the picture position, press Reset.
- To use the **Position** function after selecting **Screen Fit** in **HDMI** (1080i/1080p) or **Component** (1080i/1080p) or **Custom**, follow these steps.
- 1 Press the ▼ button to select Position.
- 2 Press the [4] button.
- 3 Press the  $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$  button to move the picture.
- 4 Press the [☐] button.
- 5 Select Close by pressing the ▲ and ▼ buttons sequentially.



If you want to reset the picture to its original position, select **Reset** in the **Position** screen. The picture will be set to its default position.

### 5.3.3 PC Screen Adjustment



Available in PC mode only.

Coarse / Fine: Removes or reduces picture noise. If the noise is not removed by Fine-tuning alone, use the Coarse function to adjust the frequency as best as possible (Coarse) and Fine-tune again. After the noise has been reduced, re-adjust the picture so that it is aligned with the center of screen.

Position: To adjust the PC's screen position if it is not centered or does not fit the product screen. Press the ▲ or ▼ button to adjust the Vertical Position. Press the ◀ or ▶ button to adjust the Horizontal Position.

Image Reset: Resets the image to the default settings.

#### 5.3.4 Resolution Select

If the picture is not normal even when the resolution of the graphics card is one of the following, you can optimize the picture quality by selecting the same resolution for the product as the PC using this menu.

Available resolutions: Off / 1024 x 768 / 1280 x 768 / 1360 x 768 / 1366 x 768



The **Resolution Select** option is only enabled when the input source is **PC**.

# 5.4 Auto Adjustment



Adjust frequency values/positions and fine tune the settings automatically.



This option is available when the input source is PC.

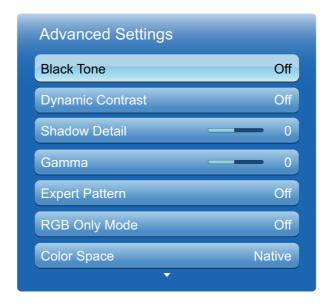
## 5.5 Advanced Settings



All **Advanced Settings** are available in the **Standard** and **Movie** modes. To use, select an option using the up and down arrow keys, and then press []. Use the arrow keys to change the value or setting, and then press [].



In PC mode, you can only make changes to Gamma and White Balance.



The displayed image may differ depending on the model.

#### 5.5.1 Black Tone

Select the black level to adjust the screen depth.

Off / Dark / Darker / Darkest

#### 5.5.2 Dynamic Contrast

Adjust the screen contrast.

Off / Low / Medium / High

#### 5.5.3 Shadow Detail (-2~+2)

Increase the brightness of dark images.

#### 5.5.4 Gamma

Adjust the primary color intensity.

#### 5.5.5 Expert Pattern

Use the **Expert Pattern** function to calibrate the picture. If the OSD menu disappears or a menu other than the Picture menu is opened, the product saves the calibration and the **Expert Pattern** screen disappears.

Off

Turns the **Expert Pattern** function off.

Pattern1

This test screen demonstrates the effect of the display settings on shades of grey and black.

Pattern2

This test screen demonstrates the effect of the display settings on colors.



- After selecting Pattern1 or Pattern2, you can adjust any of the advanced settings for desired effect.
- While the **Expert Pattern** is running, sound is not outputted.
- Only enabled on DTV, Component, HDMI modes.

#### 5.5.6 RGB Only Mode

Displays the Red, Green and Blue color for making fine adjustments to the hue and saturation.

Off / Red / Green / Blue

#### 5.5.7 Color Space

Adjusts the range and variety of colors (the color space) available to create images.

Auto / Native / Custom



To adjust Color, Red, Green, Blue and Reset, set Color Space to Custom.

#### 5.5.8 White Balance

Adjust the color temperature for a more natural picture.

- R-Offset / G-Offset / B-Offset: Adjust each color's (red, green, blue) darkness.
- R-Gain / G-Gain / B-Gain: Adjust each color's (red, green, blue) brightness.
- Reset: Resets the White Balance to it's default settings.

#### 5.5.9 10p White Balance (Off / On)

Controls the white balance in 10 point interval by adjusting the red, green, and blue brightness.

- Interval: Select interval to adjust.
- Red: Adjust the red level.
- Green: Adjust the green level.
- Blue: Adjust the blue level.
- Reset: Resets the 10p White Balance to its default settings.



- Available when the Picture Mode is set to Movie and when the external input is set to all input.
- Some external devices may not support this function.

#### 5.5.10 Flesh Tone

Emphasize pink "Flesh Tone."

#### 5.5.11 Edge Enhancement (Off / On)

Emphasize object boundaries.

#### 5.5.12 Motion Lighting (Off / On)

Reduces power consumption by reducing screen brightness when the picture on the screen is in motion.

#### 5.5.13 LED Motion Plus (Off / On)

Removes blur and judder from scenes with large amounts of rapid movement to provide a clearer picture.

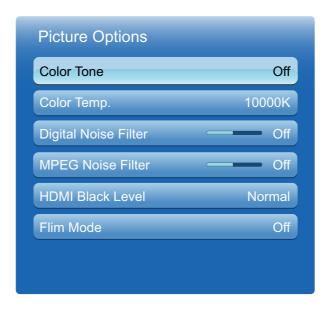
## 5.6 Picture Options



Select an option using the  $\blacktriangle$  and  $\blacktriangledown$  arrow keys, and the press [ $\clubsuit$ ]. Use the arrow keys to change the setting, and then press [ $\clubsuit$ ].



In  $\ensuremath{\text{PC}}$  mode, you can only make changes to the  $\ensuremath{\text{\textbf{Color Tone}}}.$ 



The displayed image may differ depending on the model.

#### 5.6.1 Color Tone

Off / Cool / Standard / Warm1 / Warm2



- Warm1 or Warm2 will be deactivated when the Picture Mode is Dynamic.
- Settings can be adjusted and stored for each external device connected to an input on the product.

#### 5.6.2 Color Temp.

Adjust the color temperature (Red/Green/Blue). (Range: 5000K-15000K)



This option is available when mode is set to Color Tone are set to Off.

#### 5.6.3 Digital Noise Filter

If the broadcast signal received by your product is weak, you can activate the **Digital Noise Filter** feature to reduce any static and ghosting that may appear on the screen.

- Off / Low / Medium / High / Auto / Auto Visualization
- Auto Visualization: When changing analog channels, displays signal strength.
  - Only available for analog channels.
  - When bar is green, is that the best possible signal.



When the signal is weak, try all the options until the the product displays the best picture.

#### 5.6.4 MPEG Noise Filter

Reduces MPEG noise to provide improved picture quality.

Off / Low / Medium / High / Auto

#### 5.6.5 HDMI Black Level

Selects the black level on the screen to adjust the screen depth.

Normal / Low



Available only in **HDMI** mode.

#### 5.6.6 Film Mode

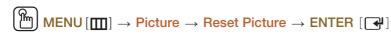
Sets the product to automatically sense and process film signals from all sources and adjust the picture for optimum quality.

Off / Auto1 / Auto2



Available in TV, AV, COMPONENT (480i / 1080i) and HDMI (480i / 1080i).

## 5.7 Reset Picture



Resets your current picture mode to its default settings.

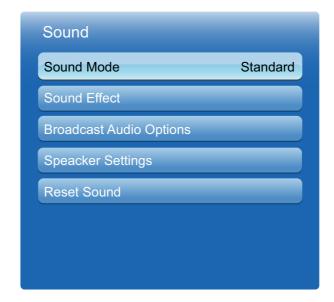
# **Sound Adjustment**

Configure the sound (Sound) settings for the product.

## 6.1 Sound Mode



Use the up and down arrow keys to select an option, and then press [].



The displayed image may differ depending on the model.

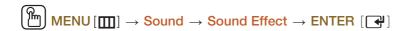
- Standard: Selects the normal sound mode.
- Music: Emphasizes music over voices.
- Movie: Provides the best sound for movies.
- Clear Voice: Emphasizes voices over other sounds.
- Amplify: Increase the intensity of high-frequency sound to allow a better listening experience for the hearing impaired.



If Speaker Select is set to External, Sound Mode is disabled.

# **Sound Adjustment**

## 6.2 Sound Effect





- If Speaker Select is set to External, Sound Effect is disabled.
- Available only when Sound Mode is set to Standard.

#### SRS TruSurround HD (Off / On)

This function provides a virtual 5.1 channel surround sound experience through a pair of speakers using HRTF(Head Related Transfer Function) technology.

#### SRS TruDialog (Off / On)

This function allows you to increase the intensity of a voice over background music or sound effects so that dialog can be heard more clearly.

#### SRS CS Headphone (Off / On)

You can hear virtual 5.1ch surround sound over the headphones.

#### Equalizer

The Equalizer displays a series of sliders. Use the up and down arrow keys to select a slider. Use the left and right arrow keys to change the slider's value. To **Reset** the **Equalizer**, select **Reset** and press [], then select **Yes** and press []. To exit, select **Close**, and then press [].



**Equalizer** is available in the standard sound mode only.

- Balance L/R: Adjusts the balance between the right and left speaker.
- 100Hz / 300Hz / 1kHz / 3kHz / 10kHz (Bandwidth Adjustment): Adjusts the level of specific bandwidth frequencies.
- Reset: Resets the equalizer to its default settings.

# **Sound Adjustment**

## 6.3 Broadcast Audio Options



#### Preferred Language

(digital channels only)

Use the up and down arrow keys to select a language, and then press [].

Digital-TV broadcasts can simultaneously transmit many audio tracks (for example, simultaneous translations of the program into foreign languages).

You can only select a language from among the ones being broadcasted.

#### Multi-Track Sound (MTS)

(analog channels only)

Select an option using the up and down arrow keys, and the press [].

- Mono: Choose for channels that are broadcasting in mono or if you are having difficulty receiving a stereo signal.
- Stereo: Choose for channels that are broadcasting in stereo.
- SAP: Choose to listen to the Separate Audio Program, which is usually a foreign-language translation.
- Depending on the program being broadcast, you can listen to Mono, Stereo, or SAP.

# **Sound Adjustment**

## 6.4 Speaker Settings



#### Speaker Select (External / Internal)

If you are listening to the sound track of a broadcast or movie through an external receiver, you may hear a sound echo caused by the difference in decoding speed between the TV's speakers and the speakers attached to your audio receiver. If this occurs, set the TV to **External**.



- When you set **Speaker Select** to **External**, the TV's speakers are turned off. You will hear sound through the external speakers only. Sound will be audible only from the external speakers if external speakers are connected when **Speaker Select** is set to **Internal**. When you set **Speaker Select** to **Internal** both the TV's speakers and the external speakers are on.
- If there is no video signal, both the TV's speakers and the external speakers will be mute.

#### Auto Volume (Off / Normal / Night)

**Normal** equalizes the volume level on each channel, so that when you change channels, the volume level is the same.

**Night** equalizes and decrease the volume level on each channel, so each channel is quieter. **Night** is useful at night, when you may want to keep the volume low.



To use the volume control of a connected source device, set **Auto Volume** to **Off**. A change to the volume control of the connected source device may not be applied if **Auto Volume** is set to **Normal** or **Night**.

## 6.5 Reset Sound

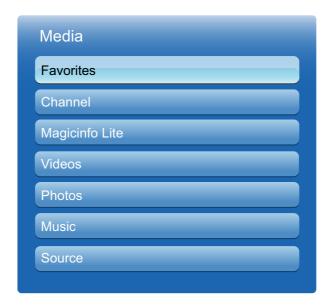


Reset all sound settings to the factory defaults. Select **Reset Sound**, press [], select **Yes** in the popup, and then press [] again.

## 7.1 Favorites



View all of your favorite channels.



The displayed image may differ depending on the model.

Your favorite channels are organized in up to five groups (Favorites 1 - 5). If you want to change from one favorite group to another, follow these steps.

- 1 Move the cursor to the group name displayed on the top of the screen, and then press the [] button. A list of groups appears.
- 2 Use the up or down arrow key to select a group, and then press the [] button. The group you select appears on the screen.

#### 7.1.1 Functions on the Favorites Screen

To access the functions listed below, use the arrow buttons to move the cursor to the icon of your choice on the top right corner of the screen, and then press [].

- View Mode :: Toggles between the Text view and Thumbnail view of your favorite channels. Thumbnail view displays a picture of the program currently on.
- Antenna 🔝 : Toggles between Air and Cable.
- Sorting : Toggles between sorting favorites by Category and sorting by Title.
- Edit Mode : Delete channels from the Favorites list.

To use **View Mode**, **Antenna**, or **Sorting**, select the appropriate icon as described above, and then press [4]. Use the left or right arrow button to make your selection, and then press [4].

#### 7.1.2 Using Edit Mode to Delete a Favorite

- 1 Select the Edit Mode on the upper right of your screen, and then press the [] button.
- 2 Press the 
  /►/▲/▼ buttons to select a channel, and then press [◄]. A check appears to the left of the channel.



- You can select more than one channel.
- Pressing [] again deselects the channel.
- 3 Select **Delete** at the bottom of your screen, and then press []. A pop-up appears asking if you want to delete the item.
- 4 Select OK, press [], and then press [] again. The channel is deleted from Favorites.
- 5 Press [ ) again to exit Edit Mode.



- The Deselect function that appears with the Delete function lets you deselect all selected channels.
- If you have assigned a channel to more than one favorite group (say Favorite 1 and Favorite 2), you must repeat this process in both groups to remove a channel entirely from your Favorites.

## 7.2 Channel



Using the **Channel** function, you can add channels, delete Added channels, set Favorite channels, use the program guide for digital broadcasts and change between the **All Channels** and **Added Ch.** screen. You can also change the antenna or channel settings by selecting the icons in the top right corner of the screen.

#### 7.2.1 Channel Manager



- Antenna : Toggle between Air or Cable. To access the Antenna function, use the arrow buttons to move the cursor to the Antenna icon on the top right corner of the screen.
- Edit Mode 🗾 : Add channels to the Favorites list and delete channels from the Channel list.
  - To change between All Channels and Added Ch., select All Channels or Added Ch. on the screen, and then press the [] button.

Edit Mode: Setting channels you watch frequently as favorites.

- 1 Select the Edit Mode icon on the upper right of your screen, and then press the [4] button.
- Press the arrow buttons to select a channel as a favorite, and then press []. A check appears to the left of the channel.
  - You can select more than one channel.
    - Pressing [ ] again deselects the channel.
- 3 Select Edit Favorites at the bottom of your screen, and then press [] button. The Edit Favorites pop-up appears.
- 4 Highlight a group on the Favorites list, and then press [].
  - The Edit Favorites screen has five groups (Favorites 1, Favorites 2, etc.). You can add a favorite channel to any one of the groups. Select a group using the up and down arrows on your remote.
- 5 Select OK, press [4], and then press [4] again.
- 6 Press [ 5] again to exit Edit Mode.

## Media

#### Using Edit Mode to Delete a Channel from the Channel List

- Select the Edit Mode icon on the upper right of your screen, and then press the [] button.
- 2 Select **Delete** at the bottom of your screen, and then press []. A pop-up appears asking if you want to delete the item.
- 3 Press the ◀/▶/▲/▼ buttons to select a channel, and then press [◄]. A check appears to the left of the channel.



- You can select more than one channel.
- Pressing [ ] again deselects the channel.
- 4 Select OK, press [], and then press [] again. The channel is deleted from the Channel list.
- 5 Press [ ) again to exit Edit Mode.
  - The Deselect function that appears with the Delete function lets you deselect all selected channels.

#### Using the **TOOLS** button with Channel

To use the **TOOLS** button functions, highlight a channel in the **Added Ch.** list or **All Channels** list, and then press the **TOOLS** button.

 Add / Delete: Add a channel to or delete a channel from the Added Ch. list. When you use the Channel button on your remote to change channels, your TV only displays the channels on the Added Ch. list.

To Add a channel using the TOOLS button in Channel, follow these steps.

- 1 Use the arrow buttons to select All Channels, and then press [4].
  - All Channels will be at the very top or bottom of the screen.
- 2 On the All Channels screen, select a greyed out channel.
- 3 Press the TOOLS button.
- Select Add on the TOOLS menu, press [→], and then press [→] again.

To **Delete** a channel using the **TOOLS** button in **Channel**, follow these steps.

- 1 Use the arrow buttons to select Added Ch., and then press [4].
  - Added Ch. will be at the very top or bottom of the screen.
- 2 On the Added Ch. screen, select a channel.
- 3 Press the **TOOLS** button.
- 4 Select Delete on the TOOLS menu, press [7], and then press [7] again.



- Your TV lists all available channels, both added and deleted, on the All Channels menu.
- A gray-colored channel indicates the channel has been deleted.
- Add only appears if you have selected a deleted channel on the All Channel list.

## Media

- Delete only appears if you have selected an added channel on the Added Ch. or All Channels list.
- You can also delete a channel on the **All Channels** list. Added channels are bright. Deleted channels are dim. To delete an Added channel on the **All Channels** list, select a bright channel, press the **TOOLS** button, select **Delete**, press [ ], then press [ ] again.
- Edit Favorites: Setting channels you watch frequently as favorites.

To set channels as favorites, follow these steps.

- 1 Press the **TOOLS** button.
  - The Edit Favorites can also be changed by using the TOOLS button on the remote control.
- 2 Select Edit Favorites in the TOOLS menu, and then press the [4] button.
- 3 Highlight a group on the Edit Favorites screen (Favorites 1, Favorites 2, etc.), and then press the [ ] button.
  - The Edit Favorites screen has five groups. You can add a favorite channel to any one of the groups. Select a group using the up and down arrows on your remote.
- 4 Select OK, and then press the [] button. The channel is made a favorite and is assigned to the favorite group you selected.
  - The TV displays the check mark next to the channel, indicating it is a favorite.
- Edit Favorites: Removing a channel from list of favorites using the TOOLS button.

To remove a channel from the list of favorites, follow these steps.

- 1 Press the **TOOLS** button.
  - The Edit Favorites can also be changed by using the TOOLS button on the remote control.
- Select Edit Favorites in the TOOLS menu, and then press the [] button. The Edit Favorites screen appears.
- The group this favorite is assigned to has a green square in front of it. Highlight that group on the **Edit Favorites** screen, press the [ ] button.
- 4 Select OK, press the [] button, and then press the [] button again. The channel is removed from the list of favorites.
- Channel Name Edit (Appears only if you have selected an analog channel.): Assign a name of up to five characters to a channel. For example, Hist, Food, Golf, etc. This makes it easier to find and select the channel.
- **Upcoming Program** (Appears only if you have selected a digital channel.): View details on the program being aired on the selected digital channel.

#### 7.2.2 Antenna



Your TV memorizes channels and adds the memorized channels to the **Channel**. Before your TV can memorize channels, you must specify the signal source, either **Air** or **Cable**. If you select cable, when you start **Auto Program**, you must also specify the cable system type, **STD**, **HRC**, or **IRC**. If you don't know your cable system type, contact your local cable company for the information. Most cable companies use **STD**.

Air / Cable

#### 7.2.3 Auto Program



Scans for channels automatically and stores them in the TV's memory.

- 1 Select Air or Cable or both by highlighting and then pressing [4].
  - If you selected Air or Cable or both on the Antenna screen, your choice will already be selected.
- 2 Select Next, and then press [→].
- If you selected Cable, the Cable System screen appears. Select Digital, and then press [4].
  - If you selected Antenna only, Auto Program starts.
- 4 Select STD, HRC, or IRC, and then press [4].
- 5 Repeat for Analog.
- Select Next, and then press [¬₽]. Auto Program starts.
  - After all the available channels are stored, Auto Program removes scrambled channels. When done, the Auto Program menu then reappears. This process can take up to 30 minutes.

#### 7.2.4 Clear Scrambled Channel



 $\overbrace{ \mathbb{P} } ] \mathsf{MENU}[ \underline{ \hspace{1cm}} ] \to \mathsf{Media} \to \mathsf{Channel} \to \mathsf{Clear} \, \mathsf{Scrambled} \, \mathsf{Channel} \to \mathsf{ENTER} \, [ \underline{\hspace{1cm}} ] ]$ 

This function filters out scrambled channels after **Auto Program** is completed. This process may take up to 20~30 minutes.

How to Stop the Clear Scrambled Channels function

- 1 Press the [ ] button to select Stop.
- 2 Press the [▲] button to select Yes.
- 3 Press the [] button.



This function is only available in Cable mode.

#### 7.2.5 Fine Tune



 $( \red{ MENU} [ \color{lim} ] \rightarrow \color{Media} \rightarrow \color{Channel} \rightarrow \color{Fine Tune} \rightarrow \color{ENTER} [ \color{lim} ]$ 

(analog channels only)

If the reception is clear, you do not have to fine tune the channel, as this is done automatically during the search and store operation. If the signal is weak or distorted, fine tune the channel manually. Scroll to the left or right until the image is clear.



- Settings are applied to the channel you're currently watching.
- Fine tuned channels that have been saved are marked with an asterisk "\*" on the right-hand side of the channel number in the channel banner.
- To reset the fine-tuning, select **Reset**.

## 7.3 MagicInfo Lite





Press the MagicInfo Lite button on the remote control.

MagicInfo Lite Player allows you to play content (image, video, document files) at a desired time.

You can play content saved in internal memory or USB memory. You can also play content via MagicInfo Lite Server after connecting to a network.



For further details about how to use MagicInfo Lite Server, refer to 181 page the MagicInfo Lite Server user manual.

### 7.4 Videos



Connecting a USB Device

- 1 Turn on your product.
- 2 Connect a USB device containing photo, music and/or movie files to the USB port on the back or side panel of the product.
- When a USB device is connected to the product, the **Connected Device** screen appears. Select a connected device, and then press [→].

#### 7.4.1 Playing a Video

- 1 Press the  $4/\triangleright/A/\nabla$  button to select the desired video in the file list.
- Press the [◄] button or [►](Play) button.



- The file name appears on the top with its playing time.
- If video time information is unknown, the playing time and progress bar are not displayed.
- During video playback, you can search using the ◀ and ▶ buttons.
- You can use the [◄](REW), [►](FF), Pause, Stop, and Play buttons on the bottom of your remote during playback.
- Press the **RETURN** button to exit the movie
- Pressing the MENU button when content from a USB device is playing will stop the playback and return you to the previous input mode.

## Supported Video Subitle Formats (for language subtiles, etc.)

Name	File extension	Format
MPEG-4 time-based text	.ttxt	XML
SAMI	smi	HTML
SubRip	.srt	string-based
SubViewer	.sub	string-based
Micro DVD	.sub or .txt	string-based

## **Supported Video Formats**

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
		DivX 3.11 / 4.x / 5.1 / 6.0	1920x1080	6 ~ 30	8	1450 / 100
* 0.4	A \ /I	XviD	1920x1080	6 ~ 30	8	MP3 / AC3
*.avi *.mkv	AVI MKV	H.264 BP / MP / HP	1920x1080	6 ~ 30	25	/ LPCM / ADPCM /
		MPEG4 SP / ASP	1920x1080	6 ~ 30	8	DTS Core
		Motion JPEG	1920x1080	6 ~ 30	8	
		DivX 3.11 / 4.x / 5.1 / 6.0	1920x1080	6 ~ 30	8	
		XviD	1920x1080	6 ~ 30	8	MP3 / AC3 / LPCM / ADPCM / WMA
*.asf	*.asf ASF	H.264 BP / MP / HP	1920x1080	6 ~ 30	25	
		MPEG4 SP / ASP	1920x1080	6 ~ 30	8	
		Motion JPEG	1920x1080	6 ~ 30	8	
*.wmv	ASF	Window Media Video v9	1920x1080	6 ~ 30	25	WMA
		H.264 BP / MP / HP	1920x1080	6 ~ 30	25	MP3 /
*.mp4 MP4	MPEG4 SP / ASP	1920x1080	6 ~ 30	8	ADPCM /	
		XVID	1920x1080	6 ~ 30	8	AAC
*.3gp 3GPP	00DD	H.264 BP / MP / HP	1920x1080	6 ~ 30	25	ADPCM / AAC / HE-AAC
	JGPP	HEMPEG4 SP / ASP	1920x1080	6 ~ 30	8	

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
	VRO	MPEG1	352x288	24 / 25 / 30	30	AC3 /
*.vro	VOB	MPEG2	1920x1080	24 / 25 / 30	30	MPEG / LPCM
4		MPEG1	352x288	24 / 25 / 30	30	AC3 /
*.mpg PS *.mpeg	MPEG2	1920x1080	24 / 25 / 30	30	MPEG / LPCM /	
	H.264	1920x1080	6 ~ 30	25	AAC	
*.ts		MPEG2	1920x1080	24 / 25 / 30	30	AC3 / AAC /
*.tp	TS	H.264	1920x1080	6 ~ 30	25	MP3 / DD+
*.trp		VC1	1920x1080	6 ~ 30	25	/ HE-AAC



- Video content will not play, or not play correctly, if there is an error in the content or the container.
- Sound or video may not work if the contents have a standard bitrate/frame rate above the compatible Frame/sec listed in the table above.
- If the Index Table is in error, the Seek (Jump) function is not supported.
- You may experience file stuttering while playing a video through a network connection.
- Video content can not be played, if there are many contents in one file.
- When you play video over a network connection, the video may not be played smoothly.
- The menu may take longer to appear if the video's bit rate exceeds 10Mbps.
- Some USB/digital camera devices may not be compatible with the player.

Video Decoder	Audio Decoder		
Supports up to H.264, Level 4.1	Supports up to WMA 7, 8, 9, STD		
H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported.	WMA 9 PRO does not support 2 channel excess multi channel or lossless audio.		
For XVID, MPEG4 SP, ASP	WMA sampling rate 22050Hz mono is not		
• Below 1280 x 720: 60 frame max	supported.		
<ul> <li>Above 1280 x 720: 30 frame max</li> </ul>	RealAudio 10 lossless is not supported.		
GMC 2 over is not supported.			

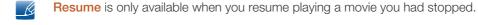
#### Using the Play Continuously Function (Resume Play)

If you exit a movie when it is playing, you can play the movie later from the point where you stopped it.



The **Resume** function does not support multiple users. (It will only memorize the point where the most recent user stopped playing.)

- 1 Select the movie file you stopped and want to resume by pressing the ◀ or ▶ button.
- 2 Press the [▶] (Play) or [♣] button.
- 3 Press Resume Icon on control panel for resume. The Movie will begin to play from where you stopped it.



#### Using the Scene Search function

Scene Search divides a video into five chapters during playback. You can then restart playback from the chapter you select.



If the index information is damaged or unsupported, you will not be able to use the **Scene Search** function.

- 1 Select the movie file you want to play from the file list section.
- Press the [▶] (play) or [♣] button.
- 3 Press the **TOOLS** button, and then press the ◀ or ▶ button to select **Scene Search**. A pop up screen appears.
- 4 Press the or ► button to select a chapter you want to view. Playback will start from the chapter you selected.

## 7.5 Photos



Connecting a USB Device

- 1 Turn on your product.
- 2 Connect a USB device containing photo, music and/or movie files to the USB port on the back or side panel of the product.
- 3 When a USB device is connected to the product, the **Connected Device** screen appears. Select a connected device, and then press [◄].

#### 7.5.1 Viewing a Photo (or Slide Show)

- Press the **◄/▶/▲/▼** button to select the desired file in the file list.
- 2 Press the [ ] button.
  - To view files manually, one at a time, press the left or right arrow buttons.
  - To start the slide show, press the [▶] (Play) button when the file you selected is displayed.
  - During the slide show, all files in the file list are displayed in order, starting from the file you selected



- When you press the [▶] (Play) button in the file list, the slide show will start immediately.
- During a slide show, press the TOOLS button to access additional functions such as Slide Show Speed, Background Music, Zoom, and Rotate.
- You can add background music to a slide show if you have music files on your USB device or PC by setting Background Music to On in the Tools menu, and then selecting music files to play.
- The Background Music cannot be changed until the BGM has finished loading.
- You can use the Pause, Stop, and Play buttons on the bottom of your remote during a slide show
- When you press the Stop or Return button, the slide show stops and the main photo screen re-appears.
- Pressing the MENU button when content from a USB device is playing will stop the playback and return you to the previous input mode.

## Media

## 7.6 Music



Connecting a USB Device

- 1 Turn on your product.
- 2 Connect a USB device containing photo, music and/or movie files to the USB port on the back or side panel of the product.
- When a USB device is connected to the product, the **Connected Device** screen appears. Select a connected device, and then press [].

#### 7.6.1 Playing Music

- 1 Press the **◄/▶/▲/▼** button to select the desired music file in the file list.
- Press the [] button or [](Play) button.
  - When the music is playing, you can search using the [◄] (REW) and [▶] (FF) button.



- If the sound is abnormal when you play MP3 files, adjust the Equalizer in the Sound menu. (An over-modulated MP3 file may cause a sound problem.)
- Pressing the MENU button when content from a USB device is playing will stop the playback and return you to the previous input mode.

#### **Creating My Playlist**

- On the Music screen, press the ◀/▶/▲/▼ button to select Edit Mode, and then press the [◄] button.
  - A check box appears to the left of the files.
- 2 Press the ◀/▶/▲/▼ button to select the tracks you want to add, and then press the [◄] button.
  - A check appears in the check box.
- 3 Repeat Step 2 to select additional tracks.
  - To select all the files in the current page, select **Select All** at the top of the page, and then press [].
- Press the 
  /▶/▲/▼ button to select Add to My Playlist.
  - Note that selecting Clear My Playlist will return My Playlist to the default playlist and remove all the tracks you added.
- 5 Press the [4] button. The message "Selected items were added to My Playlist." is displayed.
- 6 The newly created or updated playlist will be in the main Music page.

#### Playing My Playlist

Select the My Playlist folder and it will play automatically. Press the ▲ or ▼ button to play a different music file within the play list.



To delete a file from My Playlist, select the recycle bin icon next to the file you want to delete by using the direction buttons, and then press []. The file will be deleted from My Playlist.

#### **Playing Selected Music Files**

- On the Music screen, press the ◀/▶/▲/▼ button to select Edit Mode on the far right side of the screen, and then press the [◄] button.
- Press the ◀/▶/▲/▼ button to select the desired music file in the file list, and then [] button.
  - The 

    ✓ mark appears to the left of the selected files.
  - Repeat Step 2 to select additional tracks.
    - To select all the files in the current page, select Select All at the top.
    - To cancel a selection, press the [] button again.
- 4 Press the ◀/▶/▲/▼ button to select Play at the bottom of the screen, and then press [◄]. The selected music files play.

## 7.7 Videos / Photos / Music - Additional Functions

## 7.7.1 Sorting the file lists

To sort files in the file lists, select the  $\bigcirc$  (Sorting) icon in the top right of the screen by using the  $\blacktriangleleft/\blacktriangleright/\blacktriangle/\blacktriangledown$  button. Then, press the  $\bigcirc$  button. The checks below indicate which media the sort criteria apply to.

Sort Criteria	Operation	Videos	Photos	Music
Folder view	Displays the whole folder. You can view the file name and thumbnail by selecting the folder.	~	<b>✓</b>	<b>✓</b>
Title	Sorts and displays the file title in Symbol/ Number/Alphabet/Special order.	<b>✓</b>	<b>✓</b>	<b>✓</b>
Latest Date	Sorts and shows files by the latest date.	<b>✓</b>	<b>✓</b>	
Earliest Date	Sorts and shows files by the earliest date.	<b>✓</b>	<b>✓</b>	
Monthly	Sorts and shows photo files by month.		<b>✓</b>	
Artist	Sorts the music file by artist in alphabetical order.			<b>✓</b>
Album	Sorts the music file by album in alphabetical order.			<b>✓</b>
Genre	Sorts music files by the Genre.			<b>✓</b>

## 7.7.2 Videos / Photos / Music Play Option menu

When playing video or photo files, you can press the **TOOLS** button to display an Options menu.

Below are a series of tables listing the options available and the media each option applies to.

Option Name	Operations	Videos	Photos	Music
List	Return to the file list.	<b>✓</b>	~	<b>✓</b>
Play / Pause	You can start or stop. Alternatively, the (Play) or (Play) button on the remote can be used.	<b>✓</b>		<b>✓</b>
Previous / Next	Go to previous / next photo file.		<b>✓</b>	
Shuffle	You can play the music sequentially or randomly.			<b>✓</b>
Resume	You can restart a movie file from where you stopped it.	<b>✓</b>		
Scene Search	You can use the <b>Scene Search</b> function during playback to view or start a movie from the scene of your choice.	<b>✓</b>		
Title Search	You can move directly to another Title.	<b>✓</b>		
Time Search	You can search the movie using ◀ and ▶ buttons at intervals of 1 minute.	<b>✓</b>		
Subtitle	You can view a subtitle. You can select a specific language if the subtitle file contains multiple languages.	<b>✓</b>		
Repeat Mode	You can play movie and music files repeatedly.	<b>✓</b>		<b>✓</b>
Picture Size	You can adjust the picture size to your preference.	<b>✓</b>		
Picture Mode	You can change the Picture Mode.	<b>✓</b>	<b>✓</b>	
Sound Mode	You can change the <b>Sound Mode</b> .	<b>✓</b>	~	<b>✓</b>
Audio Language	You can enjoy video in one of supported languages. The function is enabled only when you play stream-type files which support multiple audio formats.	~		
Subtitle Setting	Displays the <b>Subtitle Setting</b> . You can set up a subtitle option.	<b>✓</b>		

Option Name	Operations	Videos	Photos	Music
Start Slide Show / Stop Slide Show	You can start or stop a slide show.  Alternatively, use the  or  or  on button on the remote.		<b>✓</b>	
Slide Show Speed	You can select the slide show speed during the slide show. Alternatively, use the ◀ or button on the remote.		<b>✓</b>	
Slide Show Effect	You can set various slide show effects.		~	
Background Music On / Off	You can start or stop background music.		<b>✓</b>	
Background Music Setting	You can set and select background music when watching a photo file or slide show.		~	
Zoom	You can zoom into images in full screen mode.		<b>✓</b>	
Rotate	You can rotate images.		<b>✓</b>	



- Pressing the INFO button while a device name is selected will display information about the selected device.
- Pressing the INFO button while a file is selected will display information about the selected file.

## 7.8 Source



Source allows you to select a variety of sources and change source device names.

#### **7.8.1** Source

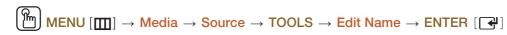
You can display the screen of a source device connected to the product. Select a source from Source List to display the screen of the selected source.



The displayed image may differ depending on the model.

- The input source can also be changed by using the **SOURCE** button on the remote control.
- The screen may not display correctly if an incorrect source is selected for the source device you want to convert to.

#### 7.8.2 Edit Name



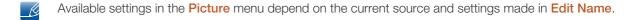
You can rename a connected source device.

Sometimes the screen will not display properly unless the name of a source device is specified in
 Edit Name. In addition, it is best to rename the source device in Edit Name to obtain optimal picture
 quality.



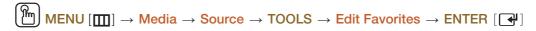
The list can include the following source devices. Source devices on the list differ depending on the selected source.

VCR / DVD / Cable STB / Satellite STB / PVR STB / AV Receiver / Game / Camcorder / PC / DVI PC / DVI Devices / TV / IPTV / Blu-ray / HD DVD / DMA



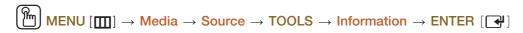
- When connecting a PC to the **HDMI IN** port with HDMI cable, you should set the TV to **PC** mode under **Edit Name**.
- When connecting a PC to the HDMI IN port with HDMI to DVI cable, you should set the TV to DVI
   PC mode under Edit Name.
- When connecting an AV devices to the HDMI IN port with HDMI to DVI cable, you should set the TV
  to DVI Devices mode under Edit Name.

#### 7.8.3 Edit Favorites



In the **Source**, press the **TOOLS** button to select **Edit Favorites**. You can set an external input source to **Favorites**.

#### 7.8.4 Information



You can see detailed information about the selected external device.

#### 7.8.5 Refresh



In the **Source**, If the external devices are not displayed, press the **TOOLS** button to select **Refresh**. Search for connected devices.

## 7.9 AllShare



AllShare connects your TV and compatible Samsung mobile phones/ devices through a network. You can play media contents including videos, photos, and music saved on your mobile phones or the other devices (such as your PC) by controlling them on the TV via the network.



- For more information, visit "www.samsung.com" or contact the Samsung call center. Mobile devices may need additional software installation. For details, refer to each device's user's guide.
- If your Samsung TV connects to a non-Samsung DLNA server, a compatibility issue may occur during video playback.
- By connecting your Samsung TV to a network via AllShare™, you can use Samsung's original functions as follows.
  - Playback of various video formats (DivX,XVID, MP4, 3GPP, AVI, ASF, MKV, etc.)
  - Video thumbnail feature
  - Bookmark function (to resume video playback)
  - Auto-chaptering (scene navigation)
  - Digital content management
  - Compatibility with various subtitle formats (SRT, SMI, SUB, TXT, TTXT)
  - Search with file names
  - And many others
- To use the original DLNA functions of Samsung fully, it is recommended that you use the AllShare™ software provided with your TV.



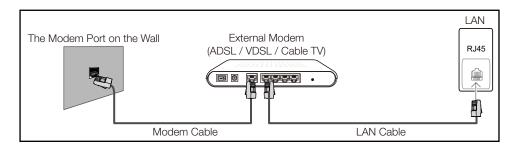
Refer to 148 page for details about the AllShare Settings menu.

## 8.1 Network Setting

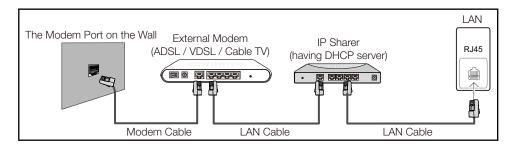
#### 8.1.1 Connecting to a Wired Network

There are three ways to attach your product to your LAN using cable.

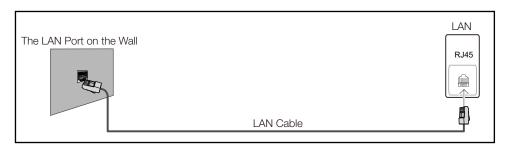
• You can attach your product to your LAN by connecting the LAN port on the back of your product to an external modem using a LAN cable. See the diagram below.



 You can attach your product to your LAN by connecting the LAN port on the back of your product to an IP Sharer which is connected to an external modem. Use LAN cable for the connection. See the diagram below.



Depending on how your network is configured, you may be able to attach your product to your LAN
by connecting the LAN port on the back of your product directly to a network wall outlet using a LAN
cable. See the diagram below. Note that the wall outlet is attached to a modem or router elsewhere
in your house.



• If you have a Dynamic Network, you should use an ADSL modem or router that supports the Dynamic Host Configuration Protocol (DHCP). Modems and routers that support DHCP automatically provide the IP address, subnet mask, gateway, and DNS values your product needs to

## **Network**

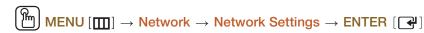
access the Internet so you do not have to enter them manually. Most home networks are Dynamic Networks.

Some networks require a Static IP address. If your network requires a Static IP address, you must enter the IP address, subnet mask, gateway, and DNS values manually on your product Cable Setup Screen when you set up the network connection. To get the IP address, subnet mask, gateway, and DNS values, contact your Internet Service Provider (ISP). If you have a Windows computer, you can also get these values through your computer.

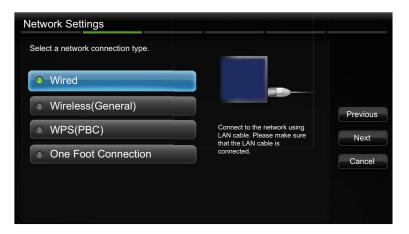


You can use ADSL modems that support DHCP if your network requires a Static IP address. ADSL modems that support DHCP also let you use Static IP addresses.

#### 8.1.2 Wired Network Settings



Set the network connection to use various Internet services such as AllShare™ and perform software upgrades.



The displayed image may differ depending on the model.

## **Network**

#### **Automatic Network Settings**

Use the Automatic **Network Settings** when connecting your product to a network that supports DHCP. To set up your product cable network connection automatically, follow these steps.

#### How to set up automatically

- 1 Go to the **Network Settings** screen.
- 2 Select Wired, press [4], and then press [4] again.
- 3 The network test screen appears and verifies the network connection. When the connection has been verified, the "Internet is connected successfully." message appears.



- If the connection process fails, check the LAN port connection.
- If the automatic process cannot find the network connection values or if you want to set the connection manually, go to the next section, Manual Network Setup.

#### **Manual Network Settings**

Use the Manual **Network Settings** when connecting your product to a network that requires a Static IP address.

#### Getting the Network Connection Values

To view the Network connection values on most Windows computers, follow these steps.

- 1 Right click the Network icon on the bottom right of the screen.
- 2 In the pop-up menu that appears, click Status.
- 3 On the dialog that appears, click the Support tab.
- 4 On the Support Tab, click the Details button. The Network connection values are displayed.

#### How to set up manually

To set up your product cable network connection manually, follow these steps.

- 1 Go to the **Network Settings** screen.
- 2 Select Wired, press [], and then press [] again. The network test screen appears and the verification process starts.
- Press [4]. The verification process stops. Select IP Settings on network connection screen. The IP Settings screen appears.
- 4 Select the field at the top, press [4], and then set IP Mode to Manual.
- 5 Press the ▼ button on your remote to go to the IP Address entry field, and then press [ ].
- 6 Enter the first portion of the IP Address (for example, 105) into the first entry field using the number keys on your remote. Press the right arrow button to go to the next field.
- 7 Enter the next portion of the **IP Address**. Press the right arrow button to go to the next field.
- 8 Repeat the entry process for each field in the IP Address.

## **Network**

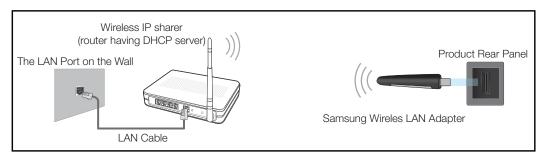


If you make a mistake when entering a number, re-enter the number to correct it. You can also press the up or down arrow button to change the number one unit at a time.

- 9 When done entering the IP Address, press [4].
- 10 Press the down arrow key to go to the Subnet Mask fields, and then press [].
- 11 Repeat the same entry process for Subnet Mask, Gateway, and DNS Server.
- 12 When done, select **OK** at the bottom of the page, and then press []. The network test screen appears and the verification process starts. When the connection has been verified, the "Internet is connected successfully." message appears.

#### 8.1.3 Connecting to a Wireless Network

To connect your product to your network wireless, you need a wireless router or modem and a Samsung Wireless LAN adapter (WIS09ABGN, WIS09ABGN2, WIS10ABGN-sold separately), which you connect to your product back or side panel USB port. See the illustration below.



Samsung's Wireless LAN adapter is sold separately and is offered by selected retailers, Ecommerce sites, and Samsungparts.com. Samsung's Wireless LAN adapter supports the IEEE 802.11a/b/g and n communication protocols. Samsung recommends using IEEE 802.11n. When you play video over a network connection, the video may not play smoothly.



- You must use the "Samsung Wireless LAN adapter" (WIS09ABGN, WIS09ABGN2 or WIS10ABGN) to use a wireless network.
- The Samsung Wireless LAN Adapter and the USB extension Cable are sold separately and are offered by select retailers, Ecommerce sites, and Samsungparts.com.
- To use a wireless network, your product must be connected to a wireless IP sharer (either a router
  or a modem). If the wireless IP sharer supports DHCP, your product can use a DHCP or static IP
  address to connect to the wireless network.
- Select a channel for the wireless IP sharer that is not currently being used. If the channel set for the
  wireless IP sharer is currently being used by another device nearby, this will result in interference
  and communication failure.
- Your product supports only the following wireless network security protocols.
  - Authentication Mode: WEP, WPAPSK, WPA2PSK
  - Encryption Type: WEP, TKIP, AES.
- If you select the Pure High-throughput (Greenfield) 802.11n mode and the Encryption type is set to WEP, TKIP or TKIP AES (WPS2Mixed) on your AP or wireless router, Samsung TVs will not support a connection in compliance with new Wi-Fi certification specifications.
- If your wireless router supports WPS (Wi-Fi Protected Setup), you can connect to the network via PBC (Push Button Configuration) or PIN (Personal Identification Number). WPS will automatically configure the SSID and WPA key in either mode.
- If your router, modem, or device is not certified, it may not connect to the product via the "Samsung Wireless LAN adapter."
- Ensure the product is turned on before you connect the Samsung Wireless LAN adapter.
- Connection Methods: You can setup the wireless network connection in five ways.
  - Auto Setup (Using the Auto Network Search function)
  - Manual Setup
  - Ad Hoc

- □ WPS (PBC)
- One Foot Connection
- The product may not recognize the Samsung Wireless LAN adapter if you connect it to the product with a USB hub or USB extension cable other than the cable supplied with the product.

#### 8.1.4 Wireless Network Setting

#### **Automatic Network Setup**

Most wireless networks have an optional security system that requires devices that access the network to transmit an encrypted security code called an Access or **Security Key**. The **Security Key** is based on a Pass Phrase, typically a word or a series of letters and numbers of a specified length you were asked to enter when you set up security for your wireless network. If you use this method of setting up the network connection, and have a **Security Key** for your wireless network, you will have to enter the Pass Phrase during the the automatic or manual setup process.

#### How to set up automatically

- 1 Go to the Network Settings screen.
- 2 Select Wireless (General), press [4], and then press [4] again.
- 3 The Network function searches for available wireless networks. When done, it displays a list of the available networks.
- In the list of networks, press the ▲ or ▼ button to select a network, and then press the [◄] button twice.
  - If the wireless router is set to Hidden (Invisible), you have to select **Add Network** and enter the correct **Network Name (SSID)** and **Security key** to establish the connection.
- If the Enter security key screen appears, go to step 6. If you select a wireless router that does not have security, go to step 8.
- 6 If the router has security, enter the Security key (Security key or PIN).



- When you enter the **Security key** (**Security key** or **PIN**), use **◄**/▶/▲/▼ buttons on your remote to select number/ characters. Press the [◄] button to enter the characters.
- You can also enter numbers by pressing the number buttons on your remote.
- When done, use the right arrow button to move the cursor to Next, and then press [4].
- The network connection screen appears and the verification process starts. When the connection has been verified, the "Internet is connected successfully." message appears.



- If the network does not accept the Security key (Security key or PIN), select Retry or select IP Settings to enter the settings manually.
- If you want to set up the connection manually, select **IP Settings**. Then, go to the next section, "How to set up manually".

## **Network**

#### **Manual Network Setup**

Use the Manual **Network Settings** when connecting your product to a network that requires a Static IP address or if the automatic connection process has failed.

#### **Getting the Network Connection Values**

To view the Network connection values on most Windows computers, follow these steps.

- 1 Right click the Network icon on the bottom right of the screen.
- 2 In the pop-up menu that appears, click Status.
- 3 On the dialog that appears, click the Support tab.
- 4 On the Support Tab, click the Details button. The Network connection values are displayed.

#### How to set up manually

To set up your product cable network connection manually, follow these steps.

- 1 Go to the **Network Settings** screen.
- 2 Select Wireless (General), press [4], and then press [4] again.
- 3 The Network function searches for available wireless networks. When done, it displays a list of the available networks.
- 4 In the list of networks, press the ▲ or ▼ button to select a network, and then press the [◄] button twice.



If the wireless router is set to Hidden (Invisible), you have to select **Add Network** and enter the correct **Network Name (SSID)** and **Security key** to establish the connection.

- 5 If the Enter security key screen appears, go to step 6. If you selected an wireless router that does not have security, go to step 8.
- 6 Enter the Security key (Security key or PIN).



- When you enter the **Security key** (**Security key** or **PIN**), use the **◄**/▶/▲/▼ buttons on your remote to select number/characters. Press [¬◄] to enter the characters.
- You can also enter numbers by pressing the number buttons on your remote.
- You should be able to find the Pass Phrase on one of the set up screens you used to set up your router or modem.
- When done, use the ▶ button to move the cursor to Next, and then press the [◄] button.
- The network connection screen appears and the verification process starts. Press [] to cancel. Select IP Settings on the network connection screen. The IP Settings screen appears.
- 9 Select the field on the top, press [], and then set IP Mode to Manual.
- 10 Press the ▼ button on your remote to go to the IP Address entry field, and then press [-4].
- 11 Enter the first portion of the IP Address (for example, 105) into the first entry field using the number keys on your remote. Press the ▶ button to go to the next field.
- 12 Enter the next portion of the IP Address. Press the ▶ button to go to the next field.

# 8

# **Network**

- 13 Repeat the entry process for each field in the IP Address.
  - If you make a mistake when entering a number, re-enter the number to correct it. You can also press the ▲ or ▼ button to change the number one unit at a time.
- 14 When done entering the IP Address, press [4].
- 15 Press the ▼ button to go to the Subnet Mask fields, and then press [◄].
- 16 Repeat the same entry process for Subnet Mask, Gateway, and DNS Server.
- 17 When done, select **OK** at the bottom of the page, and then press []. The network connection screen appears and the verification process starts. When the connection has been verified, the "Internet is connected successfully." message appears.

#### 8.1.5 WPS(PBC) Network Setup

#### How to set up using WPS(PBC)

If your router has a WPS(PBC) button, follow these steps.

- 1 Go to **Network Setting** screen.
- 2 Select WPS(PBC), press [], and then press [] again.
- 3 Press the WPS(PBC) button on your router within 2 minutes. Your product automatically acquires all the network setting values it needs and connects to your network.
- 4 The network connection screen appears, and network setup is done.

# **Network**

#### 8.1.6 One Foot Connection Network Setup

The One Foot Connection function lets you connect your Samsung product automatically to a Samsung wireless routers. If your wireless router does not support One Foot Connection, you must connect using one of the other methods.



You can check for equipment that supports One Foot Connection on www.samsung.com.

#### How to set up using One Foot Connection

- 1 Turn on the Samsung wireless router and the product.
- 2 Go to Network Settings screen.
- 3 Select One Foot Connection, and press [4], then press [4] again.
- 4 Place the wireless router in parallel with and no farther away than 25cm (about 9 3/4 inches) (of Samsung Wireless Adapter).



If One Foot Connection does not connect your product to your Router, a pop- up screen appears on the screen notifying you of the failure. If you want to try using One Foot Connection again, reset the wireless router, and then try again from Step 1. You can also choose one of the other connection setup methods.

- 5 The network connection screen appears, and network setup is done.
- 6 Place the wireless router in a desired location.



If the wireless router's settings change or you install a new wireless router, you must perform the **One Foot Connection** procedure again, beginning from Step 1.

#### Priority QOS

This Priority QOS function is unique to Samsung wireless routers.

You can connect a Samsung wireless router to many devices, such as laptops, mobile phones, BD players etc. But, when you connect a Samsung product to a Samsung wireless router, the Samsung wireless router gives the Samsung product a priority connection.

This ensures you get the highest quality streaming contents and the fastest throughput speed.

- Priority QOS makes your product faster by giving it priority bandwidth. (Priority QOS is optional.
   You can turn it on and off.)
- Because your Samsung product has a priority connection, you can enjoy HD content without buffering.



The connection speed may vary based on the network environment.

#### 8.1.7 Ad Hoc Network Setup

You can connect to a mobile device supporting Ad-hoc connections without a wireless router or AP through the product. When connected to a mobile device, you can use files on the device or connect to the Internet using the **AllShare** or Multimedia function.

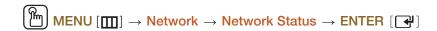
#### How to set up using Ad hoc

- 1 Go to **Network Settings** screen.
- 2 Select Wireless (General), and press [4], then press [4] again.
- 3 Select Ad hoc. The message "Ad hoc service supports a direct connection with Wi-Fi compatible devices like a cell phone or PC. Other network services may be limited. Do you want to change the network connection?" is displayed.
- 4 Select **OK**, and press []. The product searches for the mobile device.
- When the product finishes searching for your mobile device, input the generated **Network Name** (SSID) and **Security Key** into the device you want to connect and then connect to the network

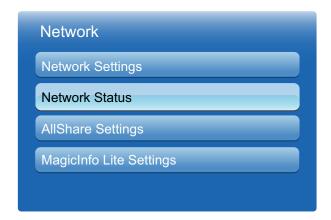


- If network does not operate normally, check the Network Name (SSID) and Security key
  again. An incorrect Security key may cause a malfunction.
- If a device is connected once, it is displayed in the Network Setting list. When you connect to it again, you can find it in the list.

## 8.2 Network Status



You can check the current network and Internet status.

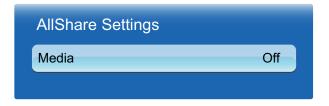


The displayed image may differ depending on the model.

# 8.3 AllShare Settings



Selects whether to use media functions on the network. For details on set up options, refer to the AllShare™ instructions.



The displayed image may differ depending on the model.

Media (On / Off): Enables or disables the media function. When the media function is on, you can control Media contents play using mobile phones or other devices that support DLNA DMC.

#### 8.3.1 Media

Shows a list of mobile phones or connected devices which have been set up to use the **Media** function with this product.



The Media function is available in all devices which support DLNA DMC.

- Allowed / Denied: Allows/Blocks the devices.
- Delete: Deletes the devices from the list.



This function only deletes the name of the device from the list. If the deleted device is turned on or tries to connect to the product, it may appear on the list again.

#### **Using the Media Function**

An alarm window appears informing you that media contents (videos, photos, music) sent from a mobile phone will be displayed on your product. The contents are played automatically 3 seconds after the alarm window appears. If you press the **RETURN** or **EXIT** button when the alarm window appears, the media contents are not played.



- The first time a device accesses your product through the media function, a warning popup window appears. Press the [ ] button to select Allow. This permits the phone to access the product freely and use the Media function to play content.
- To turn off media contents transmissions from a mobile phone, set Media to Off in the AllShare Settings.
- Contents may not play on your product depending on their resolution and format.
- The [◄] and ◀/▶ buttons may not work depending on the type of media content.
- Using the mobile device, you can control the media play. For details, refer to each mobile's user's guide.

## **Network**

# 8.4 MagicInfo Lite Settings



#### 1 Server

- Setting the MagicInfo Lite Server IP
  - Enter the server IP address and port number. Use 7001 as the port number.
    - If unable to connect to the server using port number 7001, check with your server administrator to find the correct port number and then change the port number.

#### FTP Mode

Select an FTP operating mode: Active or Passive.

#### Default Storage

- Specify the default memory to save schedules or content sent from the server to.
- If the default storage space is set to USB, a schedule will not run if a USB device is not connected.
- Send a notification message to the server when internal memory is used up.

#### 2 Storage

- Internal Memory: Displays the space currently being used or deletes all content
- USB: Displays the space currently being used

#### 3 Slideshow

- Image Viewer Time: Sets the time length you want to display images played from Local Schedule or by one of the auto playback functions
- PPT Viewer Time: Sets the time length you want to display each page of a document file played from Local Schedule or by one of the auto playback functions
- Image Effect: Configures the image transition effects.
  - Fade1, Fade2, Blind, Spiral, Checker, Linear, Stairs, Wipe, Random, None

#### 4 Schedule Name

- Select a schedule title format when creating a local schedule.
  - YYYYMMDD, YYYYDDMM, DDMMYYYY

#### 5 Safely Remove USB

Safely removes USB memory

#### 6 Information

- Device Name: Displays the name of a device recognized by the server
- Serial Number: Displays the original identification number of a device
- Software Version: Displays the software version of a device



Refer to 125 page for details about the MagicInfo Lite Player Guide menu.

# 9.1 Plug & Play



When the product is initially powered on, a sequence of on-screen prompts will assist in configuring basic settings. Press the **POWER** button. **Plug & Play** is available only when the Input **Source** is set to **TV**.

- 1 Selecting a language
  - Press the  $\blacktriangle$  or  $\blacktriangledown$  button, then press the [ $\blacksquare$ ] button. Select the desired OSD (On Screen Display) language.
- 2 Setting up the Network

Set up your network connection. Press the [] button to start. If you do not know your network set up information or want to set to it later, select Skip. You can set up the network connection later using the Network menu.

3 Setting the Clock Mode

Set the **Clock Mode** automatically or manually.

- Auto: Allows you to select time zone and DST (Daylight Savings Time).
- Manual: Allows you to manually set the current date and time.
- 4 Selecting search options for auto program

Press the ▲ or ▼ button, then press the [◄] button. Select the channel source to memorize. When setting the antenna source to Cable, a step appears allowing you to assign numerical values (channel frequencies) to the channels. For more information, refer to Channel → Auto Program.



5 Enjoy your TV.

Press the [ button.

# 9.2 Multi Control



Assign an individual ID to your product.

#### 9.2.1 Configuring settings for Multi Control

#### MDC Connection

Select a method to connect to MDC to receive the MDC signal.

RS232C MDC

Communicate with MDC via the RS232C-stereo cable.

RJ45 MDC

Communicate with MDC via the RJ45 cable.

ID Setup

Assign an ID to a set. (Range: 0~99)

Press ▲ or ▼ to select a number, and press [◄].

ID Input

Enter the ID number of the product connected to the input cable for input signal reception.

Enter the number you want using the number buttons on the remote control.

R F

Refer to page 66 for details about the MDC menu.

#### 9.3 Time



You can configure Clock Set or Sleep Timer. You can also set the product to automatically turn on or off at a specified time using the Timer function.

#### 9.3.1 Clock

Set the clock to use the various various timer features of the product.



If you disconnect the power cord, you have to set the clock again.

#### **Changing the Setting for Clock**

#### Clock Mode

Set the current time manually or automatically.

- Auto: Have the product set the current time automatically using the time from a digital channel.
  - You must have the cable or an antenna connected to the product to set the time automatically.
- Manual: Set the current time manually.
  - Depending on the broadcast station and signal, the auto time set up may not be correct. In this case, set the time manually.

#### Clock Set

Set the **Date** and **Time**.

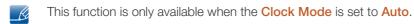
Select Clock Set. Select Date or Time, and then press []. Use the number buttons to enter numbers or press the up and down arrow buttons. Use the left and right arrow buttons to move from one entry field to the next. Press [] when done. To exit Clock Set, select Close, and then press [].



- Available only when Clock Mode is set to Manual.
- You can set the Date and Time directly by pressing the number buttons on the remote control.

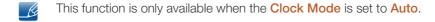
#### Time Zone

Select your time zone.



#### DST (Off / On)

Switches the DST (Daylight Saving Time) function on or off.



#### 9.3.2 Sleep Timer

Automatically shuts off the product after a preset period of time. (30 min, 60 min, 90 min, 120 min, 150 min and 180 min).



Use the up and down arrows to select a period of time, and then press []. To cancel Sleep Timer, select Off.

#### 9.3.3 On Timer

Set On Timer so that your product turns on automatically at a time and on a day of your choosing.

- On Timer: You can set up three separate On Timer configurations. (On Timer 1, On Timer 2, On Timer 3)
  - You must set the clock before you can use On Timer.
  - Setup: Select Off, Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun or Manual. If you select Manual, you can choose the days you want On Timer to turn on your product.
    - The check mark indicates days you've selected.
  - Time: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.
  - Volume: Set the desired volume level. Use the left and right arrow buttons to change the volume level.
  - Source: Select the input source of your choice.
  - Antenna (when the Source is set to TV): Select Air or Cable.
  - Channel (when the Source is set to TV): Select the desired channel.
  - Music / Photo (when the Source is set to USB): Select a folder in the USB device containing music or photo files you want played when the product turns on automatically.



- If there is no music file on the USB device or you don't select a folder containing a music file, the Timer function does not operate correctly.
- If there is only one photo file in the USB, the Slide Show will not play.
- If a folder name is too long, the folder cannot be selected. Each USB you use is assigned its own folder. When using more than one of the same type of USB, make sure the folders assigned to each USB have different names.
- We recommend that you use a USB memory stick and a multi card reader when using On Timer. The On Timer function may not work with USB devices with a built-in battery, MP3 players, or PMPs made by some manufacturers because the product can take too long to recognize these devices.

#### 9.3.4 Off Timer

You can set up three separate Off Timer configurations. (Off Timer 1, Off Timer 2, Off Timer 3)



You must set the clock before you can use Off Timer.

• Setup: Select Off, Once, Everyday, Mon~Fri, Mon~Sat, Sat~Sun or Manual. If you select Manual, you can choose the days you want Off Timer to turn off your product.



The check mark indicates days you've selected.

• Time: Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.

#### 9.3.5 Holiday Management

Timer will be disabled during a period specified as a holiday.

#### **Setting Holiday Management**

- Add: Specify the period you want to add as a holiday.
  - Select the start and end dates of the holiday you want to add using the ▲/▼ buttons, and click the Save button.
  - The period will be added to the list of holidays.
    - Start: Set the start date of the holiday.
    - End: Set the end date of the holiday.
    - Delete: Delete all items from the list of holidays.

Select **Delete**. The message "**Delete all holidays?**" will appear.

Select Yes. All holidays will be deleted.

- Apply: Set the On Timer and Off Timer to not activate on public holidays.
  - □ Press [◄] to select the On Timer and Off Timer settings you do not want to activate.
  - The selected On Timer and Off Timer will not activate.

# 9.4 Menu Language

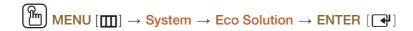


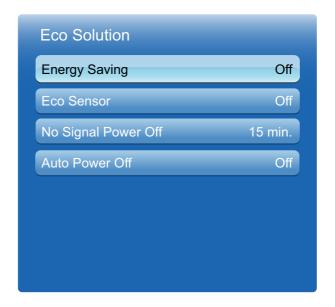
Set the menu language.



A change to the language setting will only be applied to the onscreen menu display. It will not be applied to other functions on your PC.

# 9.5 Eco Solution





The displayed image may differ depending on the model.

#### 9.5.1 Energy Saving

Save power with the **Energy Saving** feature.

While Energy Saving mode is active, the product power consumption will be controlled to save power.

Off / Low / Medium / High / Picture Off

#### 9.5.2 Eco Sensor (Off / On)

To enhance your power savings, the picture settings will automatically adapt to the light in the room.



If you adjust Backlight in the Picture menu, Eco Sensor will be set to Off.

• Min. Backlight: When Eco sensor is On, you can manually adjust the minimum screen brightness.



If **Eco Sensor** is **On**, the display brightness may change (become slightly darker or brighter) depending on the surrounding light intensity. You can control the screen's minimum brightness with the **Min. Backlight** function.

#### 9.5.3 No Signal Power Off

To avoid unnecessary energy consumption, you can set how long you want the product to remain on if it's not receiving a signal.

• Off / 15 min. / 30 min. / 60 min.



- Disabled when an attached PC is in power saving mode.
- The default setting is 15 min. for this product.
- The product will automatically power off at a specified time. The time can be changed as required.

#### 9.5.4 Auto Power Off (Off / On)

The product will automatically turn off if you don't press a button on the remote or touch a button on product front panel within 4 hours to prevent overheating.

# 9.6 Caption



(On-Screen Text Messages)

#### 9.6.1 Caption

You can switch the caption function on or off. If captions are not available, they will not be displayed on the screen.

Off / On



The **Caption** feature does not work with devices connected to the product through the Component, HDMI or PC input jacks.

#### 9.6.2 Caption Mode

You can select the desired caption mode.



The availability of captions depends on the program being Broadcasted.

- Default / CC1~CC4 / Text1~Text4: (analog channels only) The Analog Caption function operates in
  either analog product channel mode or when a signal is supplied from an external device to the
  product. (Depending on the broadcasting signal, the Analog Caption function may or may not work
  with digital channels.)
- Default / Service1~Service6 / CC1~CC4 / Text1~Text4: (digital channels only) The Digital Captions function works with digital channels.



Service1~6 may not be available in digital caption mode depending on the broadcast.

#### 9.6.3 Digital Caption Options

(digital channels only) Adjusts the each option. When done, select Close.

- Size: Options include Default, Small, Standard and Large. The default is Standard.
- Font Style: Options include Default and Styles 0 to 7. The default is Style 0.
- Foreground Color: You can change the color of the letters. Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan. The default is White.
- Background Color: You can change the background color of the caption. Options include Default, White, Black, Red, Green, Blue, Yellow, Magenta and Cyan. The default is Black.
- Foreground Opacity: This adjusts the opacity of text. Options include Default, Transparent, Translucent, Solid and Flashing.
- Background Opacity: This adjusts the opacity of the caption background. Options include Default, Transparent, Translucent, Solid and Flashing.
- Default: This option sets each Size, Font Style, Foreground Color, Background Color, Foreground Opacity and Background Opacity to their default.



- Digital Caption Options are available only when you can select Default and Service1 ~
   Service 6 in Caption mode.
- □ The availability of captions depends on the program being Broadcasted.
- The Default setting follows the standards set by the broadcaster.
- You cannot set the Foreground and Background to the same color.
- You cannot set both the Foreground Opacity and the Background Opacity to the same color.

# 9.7 Security



Every time you access the Security functions, the PIN screen will appear and the default PIN number is "0-0-0-0". The PIN screen closes and the **Security** menu appears.



The displayed image may differ depending on the model.

#### 9.7.1 Safety Lock (Off / On)

It sets safe lock function.

All the menus and buttons of the product and remote control, except for the **LOCK** button on the remote control, will be locked by the **Safety Lock** function. To unlock the menus and buttons, press the **LOCK** button and then enter the password (default password: 0 - 0 - 0 - 0).

#### 9.7.2 Button Lock (Off / On)

This menu can be used to lock the buttons on the product. Only the remote control can control the product if **Button Lock** is set to **On**.

#### 9.7.3 Program Rating Lock (Off / On)

When turned on, the **Program Rating Lock** feature can automatically block programs that you deem inappropriate for your children. You must enter a PIN (personal identification number) before you can set or change any of the **Program Rating Lock** restrictions.



- Program Rating Lock is not available in HDMI, Component or PC mode.
- The default PIN number for a new product set is "0-0-0-0".
- TV Rating: You can block TV programs based on their ratings. This function allows you to control what your children can watch. TV Rating displays a grid with locks. The following categories are on the left side.

TV-Y: Young children / TV-Y7: Children 7 and over / TV-G: General audience / TV-PG: Parental guidance / TV-14: Viewers 14 and over / TV-MA: Mature audience

#### The following categories are on top

• ALL: Lock all TV ratings. / FV: Fantasy violence / V: Violence / S: Sexual situation / L: Adult Language / D: Sexually Suggestive Dialog



- To block certain content, you select a lock, and press [◄] (That is, you "click it".). For example, click the lock at the intersection of V and TV-MA, and you block all programs that are rated violent and for mature adults. The locks are also assigned to related groups. For example, if you click TV-Y under All, then TV-Y7 will also automatically be blocked. Similarly, if you click TV-G under ALL, then all the categories in the young adult group will be blocked (TV-G, TV-PG, TV-14 and TV-MA). The sub-ratings (D, L, S, V) work similarly. So, if you block the L sub-rating in TV-PG, then the L sub-ratings in TV-14 and TV-MA will automatically be blocked.
- To unblock a category, click the lock. To unblock all the categories in a row, click the lock under **ALL**.
- To watch a blocked program, you must enter the Security code when requested.
- Movie Rating (MPAA): You can block movies based on their MPAA rating. The Motion Picture
  Association of America (MPAA) has implemented a rating system that provides parents or guardians
  with advanced information on which films are appropriate for children.

Movie Rating displays a column with locks and the following ratings categories.

**G**: General audience (no restrictions). / **PG**: Parental guidance suggested. / **PG-13**: Parents strongly cautioned. / **R**: Restricted. Children under 17 should be accompanied by an adult. / **NC-17**: No children under age 17. / **X**: Adults only. / **NR**: Not rated.



- To block certain content, you select a lock, and press [] (That is, you "click it".). For example, click the X lock and you block all X-rated movies. The rating categories are also grouped so that clicking one category blocks all the categories a parent would block along with it. For example, if you block the PG-13 category, then R, NC-17 and X will automatically be blocked also.
- To unblock a category, click the lock.

Canadian English Rating: You can block TV programs based on their Anglophone Canadian rating. Canadian English Rating displays a column with locks and the following ratings categories. C: Programming intended for children under age 8. / C8+: Programming generally considered acceptable for children 8 years and over to watch on their own. / G: General programming, suitable for all audiences. / PG: Parental Guidance. / 14+: Programming contains themes or content which may not be suitable for viewers under the age of 14. / 18+: Adult programming.



- To block certain content, you select a lock, and press [ ] (That is, you "click it".). For example, click the 18+ lock and you block all TV programs rated 18+. The rating categories are also grouped so that clicking one category blocks all the categories a parent would block along with it. For example, if you block the G category, then PG, 14+ and 18+ will automatically be blocked.
- To unblock a category, click the lock.
- Canadian French Rating: You can block TV programs based on their French Canadian rating. Canadian French Rating displays a column with locks and the following ratings categories.
  - G: General / 8 ans+: Programming generally considered acceptable for children 8 years and over to watch on their own. / 13 ans+: Programming may not be suitable for children under the age of 13. / 16 ans+: Programming is not suitable for children under the age of 16. / 18 ans+: Programming restricted to adults.



- To block certain content, you select a lock, and press [ ] (That is, you "click it".). For example, click the 18 ans+ lock and you block all TV programs rated 18 ans+. The rating categories are also grouped so that clicking one category blocks all the categories a parent would block along with it. For example, if you block the 8 ans+ category, then 13 ans+, 16 ans+ and 18 ans+ will automatically be blocked also.
- To unblock a category, click the lock.
- Downloadable U.S. Rating: Parental restriction information you can use while watching DTV channels.



- If information is not downloaded from the broadcasting station, Downloadable U.S. Rating menu is deactivated.
- Parental restriction information is automatically downloaded while you watch DTV channels. It may take several seconds.
- The **Downloadable U.S. Rating** menu is available for use after information is downloaded from the broadcasting station. However, depending on the information from the broadcasting station, it may not be available for use.
- Parental restriction levels differ depending on the broadcasting station. The default menu name and **Downloadable U.S. Ratings** change depending on the downloaded information.
- Even if you set the on-screen display to another language, the **Downloadable U.S. Rating** menu will appear in English only.
- Blocking one rating level will automatically block other categories that deal with more sensitive material.
- The rating titles (For example: Humor Level..etc) and TV ratings (For example: DH, MH, H..etc) may differ depending on the broadcasting station.

#### 9.7.4 Change PIN

The Change PIN screen will appear. Choose any 4 digits for your PIN and enter it in Enter New PIN. Reenter the same 4 digits in Confirm New PIN. When the Confirm screen disappears, press the Close button. The product has memorized your new PIN.

#### 9.8 PIP





- If you have set Double( ) mode in PIP (Picture-in-Picture), you cannot adjust the Picture Size.
- For PIP sound, refer to the **Sound Select** instructions.
- If you turn the product off while watching in the PIP mode, the PIP function is reset to off. When you turn your product on, you must turn PIP on again to watch in the PIP mode.
- You may notice that the picture in the PIP screen becomes slightly unnatural when you use the main screen to view a game or karaoke.
- While Program Rating Lock is on, you cannot use PIP.

#### PIP Settings

The picture from the external video source will be in the main screen and the picture from the product tuner will be in the PIP sub-picture screen.

Main picture	Sub picture
PC	AV, TV
AV	TV, PC, HDMI, DVI, DisplayPort, MagicInfo
Component	TV
TV	PC, Component, HDMI, DVI, DisplayPort, MagicInfo (HDMI)
HDMI, DVI, DisplayPort, MagicInfo (HDMI)	AV, TV

- PIP (Off / On): Activate or deactivate the PIP function.
- Source (depending on the input source): You can select a source of the subpicture.
- Air/Cable (Air / Cable): Select either Air or Cable as the input source for the sub-screen.
  - This option is enabled if the secondary display is set to TV.
- Channel: Select the channel for the sub-screen.

- This option is enabled if the secondary display is set to TV.
- $\square$  Size ( $\blacksquare$ ,  $\blacksquare$ ,  $\blacksquare$ ,  $\blacksquare$ ): Select a size for the subpicture.
- □ Position ( , , , , ): Select a position for the sub-picture.
  - In Double (■■, ■■, ■-) mode, you cannot select Position.
- Sound Select (Main / Sub): You can choose to listen to the sound from the Main picture or the Sub picture.

# 9.9 Auto Protection Time



If the screen displays a still image for a certain period of time you define, the product activates the screen saver to prevent the formation of burnt in ghost images on the screen.

Off / 2 hours / 4 hours / 8 hours / 10 hours

## 9.10 Screen Burn Protection



To reduce the possibility of screen burn, this unit is equipped with **Pixel Shift** screen burn prevention technology. **Pixel Shift** moves the picture slightly on the screen. The **Pixel Shift** Time setting allows you to program the time between movements of the picture in minutes.



The displayed image may differ depending on the model.

#### 9.10.1 Pixel Shift

Configure Pixel Shift to prevent screen damage.



Available Pixel Shift Settings and Optimum Settings

	Available Settings	Optimum Settings for TV/AV/Component/HDMI/PC
Horizontal	0~4 (pixels)	4
Vertical	0~4 (pixels)	4
Time (minute)	1~4 min.	4 min.



- The Pixel Shift value may differ depending on the product size (inches) and mode.
- This function is not available in the **Screen Fit** mode.
- Horizontal: Sets how many pixels the screen moves horizontally.
- Vertical: Sets how many pixels the screen moves vertically.
- Time: Set the time interval for performing the horizontal or vertical movement, respectively.

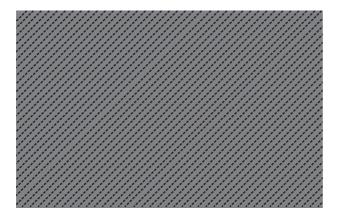
#### 9.10.2 Timer

You can set the timer for **Screen Burn Protection**.

If you start the operation to erase any residual image, the operation will be performed for the set period of time and then automatically finish.

- Mode: You can change the Safety Screen Type.
- Period: Use this function to set the execution period for each mode set in the timer.
- Time: Within the set period of time specify a time for execution.

#### 9.10.3 Pixel



This function prevents after-images by moving many pixels on the screen.

#### **9.10.4** Side Gray

Select the brightness of the grey for the screen background.

Off / Light / Dark

### 9.11 Video Wall



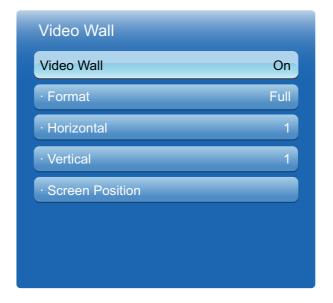
Customize the layout of multiple displays that are connected to form a video wall. In addition, display part of a whole picture or repeat the same picture on each of the connected multiple displays. To display multiple images, refer to MDC Help or the MagicInfo user guide. Some models may not support the MagicInfo function.



If more than four displays are connected horizontally and vertically, it is recommended that you use an input resolution of XGA (1024 x 768) level or higher to prevent a dark picture due to degradation in the contrast or color intensity.

#### 9.11.1 Video Wall

You can activate or deactivate Video Wall. To organize a video wall, select On.



The displayed image may differ depending on the model.

#### 9.11.2 Format

Select a format to display images on multiple displays.

- Full: Display images in full screen.
- Natural: Display images at the original resolution without enlarging or reducing.



The Format option is only enabled when Video Wall is set to On.

#### 9.11.3 Horizontal

This function automatically divides the screen according to the specified number of horizontal displays. Enter the number of horizontally arranged displays.

The horizontal screen will automatically be divided according to the number entered.

A maximum of 15 displays can be assigned to the horizontal arrangement.



- The screen can be divided into a maximum of 100 screens (horizontal and vertical screens multiplied). For example, if the horizontal arrangement is set to 15, a maximum of 6 displays can be assigned to the vertical arrangement. Conversely, if the vertical arrangement is set to 15, a maximum of 6 displays can be assigned to the horizontal arrangement.
- The Horizontal option is only enabled when Video Wall is set to On.

#### 9.11.4 Vertical

This function automatically divides the screen according to the specified number of vertical displays. Enter the number of vertically arranged displays.

The vertical screen will automatically be divided according to the number entered.

A maximum of 15 displays can be assigned to the vertical arrangement.



- The screen can be divided into a maximum of 100 screens (horizontal and vertical screens multiplied). For example, if the horizontal arrangement is set to 15, a maximum of 6 displays can be assigned to the vertical arrangement. Conversely, if the vertical arrangement is set to 15, a maximum of 6 displays can be assigned to the horizontal arrangement.
- The Vertical option is only enabled when Video Wall is set to On.

#### 9.11.5 Screen Position

You can customize the arrangement of split screens by moving displays identified with a number using the **Screen Position** function.

Select Screen Position to display the arrangement of displays (identified with a number) specified according to the Horizontal or Vertical settings. To customize the arrangement, move a number (display) using the direction buttons on the remote control and press [].



- A maximum of 100 displays can be arranged in Screen Position.
- The Screen Position option is only enabled when Video Wall is set to On.
- The Screen Position window is only displayed when Horizontal and Vertical are configured.

# 9.12 Source AutoSwitch Settings



Turning on the display with **Source AutoSwitch On**, and the previous video source selection is not active, the display will automatically search the different video input sources for active video.

#### Source AutoSwitch

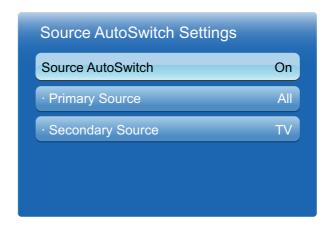
When the **Source AutoSwitch** is **On**, the display video source will automatically be searched for active video.

The **Primary Source** selection will be activated, if the current video source is not recognized.

Secondary Source selection will become active, if no primary video source is available.

If both the primary and secondary input sources are not recognized, the display will perform two searches for an active source, each search checking the primary and then secondary source. If both searches fail, the display will return to the first video source and display a message indicating that there is no signal.

When the **Primary Source** selection is set to **All**, the display will search all the video source inputs twice in sequence looking for an active video source, returning back to the first video source in the sequence if no video is found.



The displayed image may differ depending on the model.

Primary Source

Specify **Primary Source** for the automatic input source.

Secondary Source

Specify **Secondary Source** for the automatic input source.

### 9.13 General





The displayed image may differ depending on the model.

#### 9.13.1 Max. Power Saving

Turns off the product to reduce power consumption after the PC has been left idle for a specified period of time.



Available only PC mode.

#### 9.13.2 Game Mode

When connecting to a game console such as PlayStation™ or Xbox™, you can enjoy a more realistic gaming experience by selecting game mode.



- Precautions and limitations for game mode
  - To disconnect the game console and connect another external device, set **Game Mode** to **Off** in the setup menu.
  - If you display the TV menu in Game Mode, the screen shakes slightly.
- Game Mode is not available when the input source is set to TV or PC.
- After connecting the game console, set **Game Mode** to **On**. Unfortunately, you may notice reduced picture quality.
- If Game Mode is On
  - Picture mode is set to Standard and Sound mode is set to Movie.

#### 9.13.3 BD Wise

Provides the optimal picture quality for Samsung DVD, Blu-ray and Home Theater products which support **BD Wise**. When **BD Wise** is turned **On**, the picture mode is automatically changed to the optimal resolution.



Available when you connect Samsung products that support BD Wise through an HDMI cable to the TV.

#### 9.13.4 Auto Power

Enabling this option will automatically power on the product if the power cable is connected.

#### 9.13.5 Standby Control

You can set the screen standby mode to be applied when an input signal is received.

#### Auto

Power-saving mode will activate if no input signals are detected even though a source device is connected to the display.

The message "No Signal" will appear if no source device is connected.

#### On

Power-saving mode will activate if no input signals are detected.

#### Off

The message "No Signal" will appear if no input signals are detected.



- The **Standby Control** option is only enabled when **Source** is set to **PC**, **DVI**, **HDMI** or **DisplayPort**.
- If "No Signal" is displayed although a source device is connected, check the cable connection. Refer to page 135 for details about connecting source devices.

#### 9.13.6 Lamp Schedule

Enables the lamp value to be adjusted to a user-specified value at a specified time in MDC mode.

#### 9.13.7 OSD Display

Displays or hides a menu item on the screen.

Source OSD / No Signal OSD / MDC OSD

#### 9.13.8 Power On Adjustment

You can set the warm-up time for the screen to turn on after the power button is pressed. (Range: 0-50 seconds)



A warm-up time that is too short may damage the product due to overvoltage.

#### 9.13.9 Temperature Control

This function detects the internal temperature of the product. You can specify the temperature range that is acceptable.

The default temperature is set to 77°C.

The recommended operating temperature for this product is 75 to 80°C (based on an ambient temperature of 40°C).



The screen will become darker if the current temperature exceeds the specified temperature limit. If the temperature continues to rise, the product will power off to prevent overheating.

#### 9.13.10 Device Name

Select or enter a **Device Name**. This name can be show on network remote controls or **AllShare** device over the network.

# 9.14 Anynet+(HDMI-CEC)



#### 9.14.1 Anynet+(HDMI-CEC)

What is Anynet+?

Anynet+ is a function that enables you to control all connected Samsung devices that support Anynet+ with your Samsung product remote. The Anynet+ system can be used only with Samsung devices that have the Anynet+ feature. To be sure your Samsung device has this feature, check if there is an Anynet+ logo on it.



- You can only control Anynet+ devices using the product remote control, not the buttons on the product.
- The product remote control may not work under certain conditions. If this occurs, reselect the Anynet+ device.
- The Anynet+ functions do not operate with other manufacturers' products.
- For instructions explaining how to connect Anynet+ external devices, refer to the device's user manual You must connect an Anynet+ device using an HDMI cable. Some HDMI cables may not support Anynet+ functions.
- Anynet+ works when the AV device supporting Anynet+ is in the standby or on status.
- Anynet+ supports up to 12 AV devices in total. Note that you can connect up to 3 devices of the same type.
- However, you can connect only one Anynet+ Home Theater. To connect an Anynet+ Home Theater, connect the Home Theater to the product using an HDMI cable then.

#### Anynet+ Menu

The Anynet+ menu changes depending on the type and status of the Anynet+ devices connected to the product.

Anynet+ Menu	Description
View TV	Changes Anynet+ mode to TV broadcast mode.
Device List	Shows the Anynet+ device list.
(device_name) MENU	Shows the menu of the connected device menus. E.g. if a DVD player is connected, the disc menu of the DVD player will appear.
(device_name) Tools	Shows the tools menu of the connected device. E.g. if a DVD player is connected, the tools menu of the DVD player will appear.  Depending on the device, this menu may not be available.
(device_name) Title Menu	Shows the title menu of the disc in the connected device. E.g. If a DVD player is connected, the title menu of the movie in the DVD player will appear.  Depending on the device, this menu may not be available.

#### 9.14.2 Auto Turn Off (No / Yes)

Setting an Anynet+ Device to turn Off automatically when the product is turned off.



- If Auto Turn Off is set to Yes, running external devices will turn off at the same time as the product powers off.
- May not be enabled depending on the device.

#### **Switching between Anynet+ Devices**

- Press the **TOOLS** button, select **Anynet+** (**HDMI-CEC**), and then press [4].
- 2 Select Device List, and then press the [4] button.
  - If you cannot find a device you want, select Refresh to refresh the list.
- 3 Select a device, and then press the [4] button. You can switch to the selected device.



The **Device List** menu appears only when you set **Anynet+** (**HDMI-CEC**) to **On** in the **System** menu.

- Switching to the selected device may take up to 2 minutes. You cannot cancel the switching operation while switching is in progress.
- If you have selected an Anynet+ device by pressing the SOURCE button and then selecting
  its input source, you cannot use the Anynet+ function. Make sure to switch to an Anynet+
  device by using the Device List.

# Troubleshooting for Anynet+

Problem	Possible Solution
Anynet+ does not work.	Check if the device is an Anynet+ device. The Anynet+ system supports Anynet+ devices only.
	You can connect only one receiver (home theater).
	Check if the Anynet+ device power cord is properly connected.
	Check the Anynet+ device's Video/Audio/HDMI cable connections.
	Check whether Anynet+ (HDMI-CEC) is set to On in the Anynet+ setup menu.
	Check whether the remote control is Anynet+ compatible.
	<ul> <li>Anynet+ doesn't work in certain situations. (Searching channels, operating Plug &amp; Play (initial setup), etc.)</li> </ul>
	If you have removed and then reconnected the HDMI cable, please make sure to search devices again or turn your product off and on again.
	Check if the Anynet+ function of the Anynet device is set on.
I want to start Anynet+.	<ul> <li>Check if the Anynet+ device is properly connected to the product and check if the Anynet+ (HDMI-CEC) is set to On in the Anynet+ Setup menu.</li> </ul>
	Press the <b>TOOLS</b> button to display the Anynet+ menu and select a menu you want.
I want to exit Anynet+.	Select View TV in the Anynet+ menu.
	Press the <b>SOURCE</b> button on the product remote control and select a non- Anynet+ device.
The message "Connecting to Anynet+ device" appears on the screen.	You cannot use the remote control when you are configuring     Anynet+ or switching to a view mode.
	Use the remote control after the product has completed Anynet+ configuration or has finished switching to Anynet+.

Problem	Possible Solution
The Anynet+ device does not play.	You cannot use the play function when Plug & Play (initial setup) is in progress.
The connected device is not displayed.	<ul> <li>Check whether or not the device supports Anynet+ functions.</li> <li>Check whether or not the HDMI cable is properly connected.</li> <li>Check whether Anynet+ (HDMI-CEC) is set to On in the Anynet+ setup menu.</li> </ul>
	<ul> <li>Search Anynet+ devices again.</li> <li>Anynet+ requires an HDMI connection. Make sure the device is connected to your product with an HDMI cable.</li> <li>Some HDMI cables may not support Anynet+ functions.</li> </ul>
	<ul> <li>If the connection is terminated because there has been a power failure or the HDMI cable has been disconnected, please repeat the device scan.</li> </ul>

# 9.15 DivX® Video On Demand



Shows the registration code authorized for the product. If you connect to the DivX web site and register using that code, you can download the VOD registration file.



For more information about DivX® VOD, visit "http://vod.divx.com".

## 9.16 Network Remote Control



Turn on/off or give permission to Samsung mobile phone devices to connect with and control the product.

You must have a Samsung Mobile phone/device which supports Wireless Remote Control. For more details, refer to each device's manual.

# 9.17 Reset System



This option returns the current settings under system to the default factory settings.

# 9.18 Reset All



This option returns all the current settings for a display to the default factory settings.

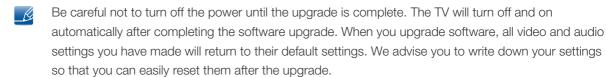
# Support

# 10.1 Software Upgrade



The **Software Upgrade** menu lets you upgrade your TV's software to the latest version.

• Current Version: This is the software version already installed in the TV.



#### 10.1.1 By USB

To upgrade by USB, follow these steps.

- 1 Visit www.samsung.com.
- 2 Download the latest USB software upgrade exe archive to your computer.
- 3 Extracts the exe archive to your computer. You should have a single folder with the same name as the exe file.
- 4 Copy the folder to a USB flash drive.
- 5 Turn on the TV, and then insert the USB flash drive into the USB port of the TV.
- 6 In the TV's menu, go to Support → Software Upgrade.
- 7 Select By USB.
  - Please be careful not to remove the USB drive until the upgrade is complete.

# Support

#### 10.1.2 Alternative Software

Alternative Software

The Alternative Software option lets you upgrade using a file the TV downloaded earlier, but you decided not to install immediately, or a file downloaded by the TV in Standby Mode.

To upgrade By Alternative Software, follow these steps.

- If upgrade software has been downloaded, you will see the software version number to the right of **Alternative Software**.
- 2 Select Alternative Software, and then press the [4] button.
- 3 The TV displays a message asking if you want to upgrade. Select Yes. The TV begins the upgrade.
- 4 When the upgrade is complete, the TV turns off automatically, and then turns on.

# 10.2 Contact Samsung



View this information when your TV does not work properly or when you want to upgrade the software. You can find information regarding our call centers and how to download products and software.

## 11.1 File Formats Compatible with MagicInfo Lite Player

[Read before using MagicInfo Lite Player]

- Supported USB-device file systems include FAT16 and FAT32. (NTFS is not supported.)
- A file with a vertical and horizontal resolution larger than the maximum resolution cannot be played.

Check the vertical and horizontal resolution of the file.

- Video that does not contain audio data is not supported. Check that the video file contains audio data.
- Check the supported video and audio Codec types and Versions.
- Check the supported file versions.
  - Flash version up to 10.1 is supported
  - PowerPoint version up to 97 2007 is supported
- Content with a size of 2GB or larger cannot be assigned to Network Schedule.

#### 11.1.1 Video / Audio

File Extension	Container	Video Codec	Resolution	Frame rate(fps)	Bit rate (Mbps)	Audio Codec	
		DivX 3.11 / 4.x / 5.1 / 6.0	1920x1080	6 ~ 30	8	MP3 / AC3 / LPCM / ADPCM / DTS Core	
Ψ.		XviD	1920×1080	6 ~ 30	8		
*.avi *.mkv	AVI MKV	H.264 BP / MP / HP	1920x1080	6 ~ 30	25		
		MPEG4 SP / ASP	1920×1080	6 ~ 30	8		
		Motion JPEG	1920×1080	6 ~ 30	8		
	ASF		DivX 3.11 / 4.x / 5.1 / 6.0	1920x1080	6 ~ 30	8	
		XviD	1920×1080	6 ~ 30	8	MP3 / AC3 /	
*.asf		H.264 BP / MP / HP	1920x1080	6 ~ 30	25	LPCM / ADPCM / WMA	
		MPEG4 SP / ASP	1920×1080	6 ~ 30	8		
		Motion JPEG	1920×1080	6 ~ 30	8		
*.wmv	ASF	Window Media Video v9	1920x1080	6 ~ 30	25	WMA	

File Extension	Container	Video Codec	Resolution	Frame rate(fps)	Bit rate (Mbps)	Audio Codec
		H.264 BP / MP / HP	1920×1080	6 ~ 30	25	MP3 /
*.mp4	MP4	MPEG4 SP / ASP	1920×1080	6 ~ 30	8	ADPCM / AAC
		XVID	1920×1080	6 ~ 30	8	, , , , ,
*.3gp	3GPP	H.264 BP / MP / HP	1920x1080	6 ~ 30	25	ADPCM / AAC /
		MPEG4 SP / ASP	1920×1080	6 ~ 30	8	HE-AAC
*	VRO	MPEG1	352×288	24 / 25 / 30	30	AC3 / MPEG
*.vro	VOB	MPEG2	1920×1080	24 / 25 / 30	30	/ LPCM
<b>*</b>	PS	MPEG1	352×288	24 / 25 / 30	30	AC3 / MPEG
*.mpg		MPEG2	1920×1080	24 / 25 / 30	30	/ LPCM /
*.mpeg		H.264	1920×1080	6 ~ 30	25	AAC
*.ts		MPEG2	1920×1080	24 / 25 / 30	30	AC3 / AAC /
*.tp	TS	H.264	1920×1080	6 ~ 30	25	MP3 / DD+
*.trp		VC1	1920×1080	6 ~ 30	25	/ HE-AAC

#### Video

- Video content without audio is not supported.
- 3D video is not supported.
- Content with a resolution larger than the resolution specified in the table above is not supported.
- Video content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy video during playback.
- H.264 Level 4.1 or lower is supported.
- H.264 FMO/ASO/RS, VC1 SP/MP/AP L4, AVCHD are not supported.
- XVID, MPEG4 SP/ASP
  - 1280 x 720 or smaller: Max. 60 frames / Larger than 1280 x 720: Max. 30 frames
- GMC 2 or higher is not supported.

#### Audio

- Audio content without video is not supported.
  - (Only mp3 files are supported as background music for image/PPT slideshows. This feature is available only when using the network schedule menu.)
- Audio content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy audio during playback.
- WMA 7, 8, 9 STD or lower is supported.
- WMA 9 PRO does not support lossless audio and multi-channel audio higher than 2 channels.
- WMA sampling rate 22050Hz mono is not supported.

#### **Image**

- Compatible image file format : Jpeg
- Supported maximum resolution: 15,360 x 8640
- Supported image effects: 8 effects (Fade1, Fade2, Blind, Spiral, Checker, Linear, Stairs, Wipe)

#### Flash

- Compatible with Flash 10.1
- Flash Animation
  - Compatible file format : SWF
- Resolution: 1280 x 720
  - Caution
    - Performance comparable to Flash Player on a Windows operating system cannot be guaranteed
    - Optimization is needed during content creation
- Flash Video
  - Compatible file format : FLV
  - Video
    - Codec : H.264 BP
    - Resolution: 1920 x 1080
  - Audio
    - Codec : H.264 BP
  - Caution
    - F4V file format is not supported
    - Screen Video is not supported

#### **Power Point**

Compatible document file formats

Extension : ppt, pptx

□ Version : Office 97 ~ Office 2007

- Functions not supported
  - Animation effect
  - 3D shapes (which will be displayed in 2D)
  - Header and footer (some subitems are not supported)
  - Word Art
  - Align (A group alignment error may occur)
  - Office 2007 (SmartArt is not fully supported. 97 out of 115 subitems are supported.)
  - Object insertion
  - Opening encrypted documents
  - Vertical text (some subitems are not supported)
  - Slide notes and handout

### 11.2 Network Schedule

#### 11.2.1 Connecting to a server

#### **Network setup**

To run MagicInfo Lite, connect to a network.



Refer to 138 page for details about the Network Settings menu.

#### Server setup

Go to MENU  $\rightarrow$  Network  $\rightarrow$  MagicInfo Lite Settings  $\rightarrow$  Server. Next, enter the server information. (E.g.: http://192.168.0.10:7001/MagicInfo/)



#### Configuring the FTP mode and default storage space

- **Default Storage**: Specify the location you want to save content (downloaded from the server) to.
  - Internal Memory: Save the content to the internal memory of the product.
  - USB memory: Save the content to USB memory.



If a network schedule is running when USB memory is not connected, the default content will run.



#### 11.2.2 MagicInfo Lite Settings



Press the MagicInfo Lite button on the remote control.

You can view whether the server is connected (approval) in the **MagicInfo Lite** menu screen. To view whether the server is connected when a network schedule is running, press **INFO** on the remote.



#### 11.2.3 Approving a connected device from the server

1 Access the server you have assigned to your device.

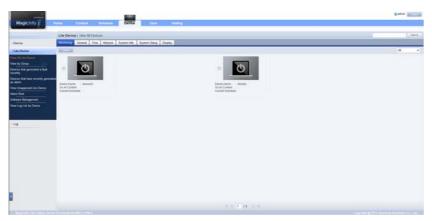


2 Enter your ID and password to log in.

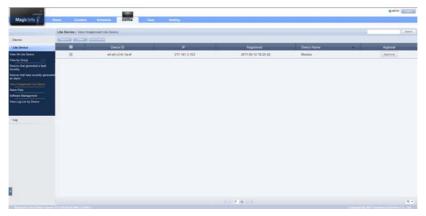
3 Select Device from the top menu bar.



4 Select Lite Device from the menus on the left.



5 Select View Unapproved Lite Device from the sub-menus of Lite Device.



6 Select the **Approve** button for your device from the list of unapproved Lite devices.

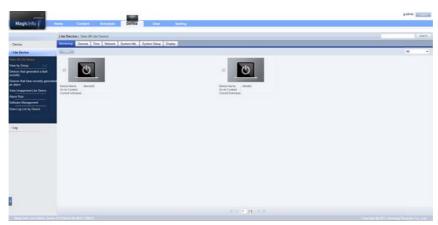


Pressing the INFO button on the remote when a network schedule is running will display the details of the schedule. Check that the correct device has been selected by viewing the device ID in the details.

7 Enter the information required to approve the device.



- Device Name: Enter the device name.
- Device Model Name: Select your device model.
- Device Group: Select \_ to specify the group.
- Location: Enter the current location of the device.
- 8 Select the View All Lite Device menu to check that the device has been registered.



When the device is approved by the server, the schedule registered in the selected group will be downloaded to the device. The schedule will run after it is downloaded.

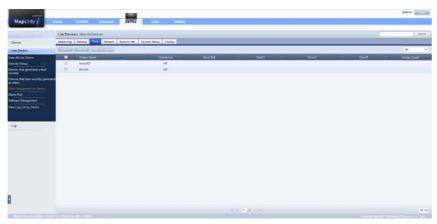


- For further details on how to configure a schedule, refer to the <MagicInfo server user's manual>.
- If a device is deleted from the list of devices approved by the server, the device will reboot to reset its settings.

### 11.2.4 Setting the current time

A schedule may not run if the time set on the device is different from the server's current time.

1 Go to the tabs **Device**  $\rightarrow$  **Time**.



- 2 Select your device.
- 3 Select Clock Set, and sync the time with the server.
- For further details on how to manage the time (scheduling, holiday management, etc.), refer to the <MagicInfo server user's manual>.

### 11.3 Local Schedule

Run a schedule created by Local Schedule Manager.

Go to Local Schedule Manager → Select the content you want to run

- B
- This menu is disabled if no schedule was created by Local Schedule Manager.
- 1 Select Local Schedule Manager in the MagicInfo Lite menu screen.
- 2 Run a schedule created by local schedule.

## 11.4 Local Schedule Manager

Configure the settings for playback from Local Schedule. Alternatively, select and play content from internal or USB memory according to the customized playback sequence.

#### 11.4.1 Registering a Local Schedule

1 Select Local Schedule Manager in the MagicInfo Lite menu screen.



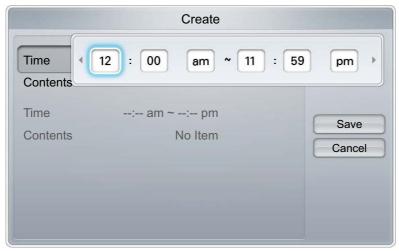
## Ma Ma

## MagicInfo Lite

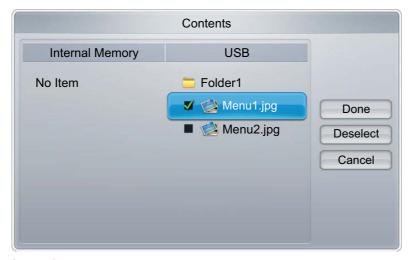
Select Create in the Local Schedule Manager screen.



3 Select Time to set the time you want to play content.



4 Select Contents to specify the content you want to play.



5 Select Save.

6 Select the memory space you want to save the content to.



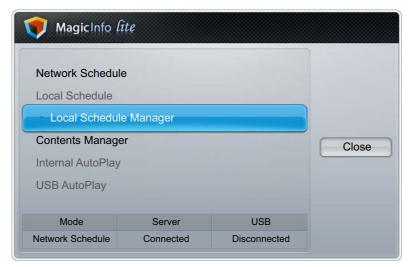
7 Check that the schedule has been added to the Local Schedule Manager.



### 11.4.2 Modifying a Local Schedule

Ensure at least one Local Schedule is registered.

1 Select Local Schedule Manager in the MagicInfo Lite menu screen.



2 Select the local schedule you want to modify.



3 Select Edit.



4 Change the details of the local schedule. Next, select Save.

### 11.4.3 Deleting a Local Schedule

- Ensure at least one Local Schedule is registered.
- 1 Select Local Schedule Manager in the MagicInfo Lite menu screen.



Magic Magic

## MagicInfo Lite

Select the local schedule you want to delete.



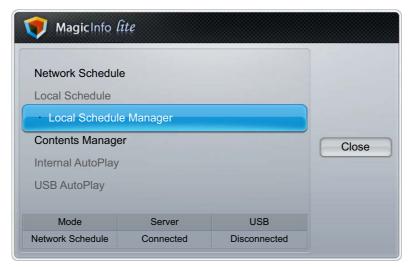
3 Select Delete.



### 11.4.4 Running a Local Schedule

Ensure at least one Local Schedule is registered.

1 Select Local Schedule Manager in the MagicInfo Lite menu screen.



2 Select the local schedule you want to run. Next, select Run.



### 11.4.5 Stopping a Local Schedule

- This function is enabled only when a schedule is running. Selecting **Stop** will change the running mode from local schedule to network schedule.
- 1 Select Local Schedule Manager in the MagicInfo Lite menu screen.



2 Select Stop.



### 11.4.6 Viewing the details of a Local Schedule

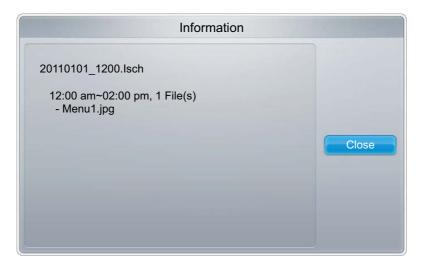
Select Local Schedule Manager in the MagicInfo Lite menu screen.



Select the local schedule you want to view the details of.



3 The details of the schedule will be displayed.



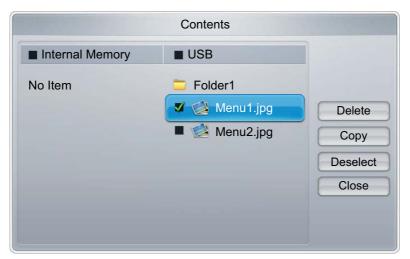
## 11.5 Contents Manager

#### 11.5.1 Copying content

1 Select Contents Manager in the MagicInfo Lite menu screen.



- 2 Select the content you want to copy.
  - If content under Internal Memory is selected: You can copy the content under Internal Memory to USB memory.
  - If content under USB is selected: You can copy the content under USB memory to Internal Memory.
    - Selecting content under Internal Memory and USB memory at the same time will disable copying.



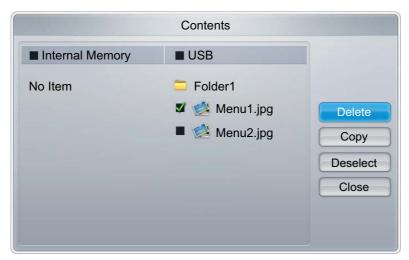
3 Select Copy.

#### 11.5.2 Deleting content

1 Select Contents Manager in the MagicInfo Lite menu screen.



- Select the content you want to delete.
  - Content under Internal Memory and USB memory can be deleted at the same time.



3 Select **Delete**.



## 11.6 Internal AutoPlay

#### 11.6.1 Running Internal AutoPlay

- Ensure at least one content item exists under Internal Memory.
- 1 Select Internal AutoPlay in the MagicInfo Lite menu screen.
  - Play content, which has been copied to Internal Memory, in alphabetical order.



### 11.7 USB AutoPlay

#### 11.7.1 Running Internal AutoPlay



- 1 Select **USB AutoPlay** in the **MagicInfo Lite** menu screen.
  - The content contained in the MagicInfoSlide folder on the USB device will play in alphabetical order.

 USB AutoPlay will automatically run if USB memory is connected when Network Schedule or Local Schedule is running.

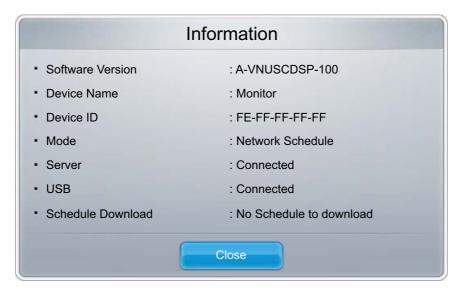


### 11.8 When Content is Running

#### 11.8.1 Viewing the details of the content that is running

- Press the **INFO** button on the remote control.
- 1 Software Version: Displays the software version of a device
- 2 Device Name: Displays the name of a device recognized by the server
- 3 Device ID: Displays the original identification number of a device
- 4 Mode: Displays the current operating mode (Network Schedule, Local Schedule, Internal AutoPlay or USB AutoPlay) of MagicInfo Lite Player
- 5 Server: Displays the connection status (Connected, Disconnected or Non-approval) of the server
- 6 USB: Displays the connection status of a USB device

7 Schedule Download: Displays the progress of a network schedule being downloaded from the server



#### 11.8.2 Changing the settings for the content that is running



Press the **TOOLS** button on the remote control.

You can change the **Picture Mode** or **Sound Mode** setting or safely remove a USB device (**Safely Remove USB**) while content is playing by pressing the **TOOLS** button on the remote control.

- Picture Mode: Customizes the screen settings for the content currently playing (Dynamic, Standard, Natural, Movie)
- Sound Mode: Customizes the audio settings for the content currently playing (Standard, Music, Movie, Clear Voice, Amplify)
- Safely Remove USB



## 2

## **Troubleshooting Guide**

## 12.1 Requirements Before Contacting Samsung Customer Service Center

#### 12.1.1 Testing the Product



Before calling Samsung Customer Service Center, test your product as follows. If the problem persists, contact Samsung Customer Service Center.

Check if your product is operating normally by using the product test function.

If the screen remains blank while the power LED blinks even when the product is correctly connected to a PC, perform product testing.

- 1 Power off both the PC and product.
- 2 Disconnect all the cables from the product.
- 3 Power on the product.
- 4 If "No Signal" is displayed, the product is operating normally.



If the screen remains blank, check the PC system, video controller and cable.

#### 12.1.2 Checking the Resolution and Frequency

"Not Optimum Mode" will briefly be displayed if a mode that exceeds a supported resolution is selected (refer to Supported Resolutions).



## 12.1.3 Check the followings.

Installation issue (PC mode)				
The screen keeps switching on and off.	Check the cable connection between the product and PC, and ensure the connection is secure.  ("2.2Connecting and Using a PC")			
Blank spaces are found at the top and bottom of the screen when an HDMI or HDMI-DVI	Blank spaces on the screen are not caused by the product.			
cable is connected to the product and PC.	The cause of the problem is the PC or graphics card, and can be fixed by adjusting the screen size in the HDMI or DVI option of the graphics card settings menu.			
	If the graphics card settings menu has no option to adjust the screen size, update the graphics card driver to the latest version.			
	(Please contact the graphics card or computer manufacturer for details on how to adjust the screen settings.)			

Screen issue					
The power LED is off. The screen will not	Make sure that the power cord is connected.				
switch on.	("2.2Connecting and Using a PC")				
"No Signal" is displayed on the screen (refer to "Connecting to a PC").	Check that the product is connected correctly with a cable				
	("2.2Connecting and Using a PC")				
	Check that the device connected to the product is powered on.				
"Not Optimum Mode" is displayed.	This message is displayed when a signal from the graphics card exceeds the product's maximum resolution and frequency.				
	Refer to the Standard Signal Mode Table and set the maximum resolution and frequency according to the product specifications.				
The images on the screen look distorted.	Check the cable connection to the product ("2.2Connecting and Using a PC")				



Screen issue				
The screen is not clear. The screen is blurry.	Adjust Coarse and Fine.			
	Remove any accessories (video extension cable, etc) and try again.			
	Set the resolution and frequency to the recommended level.			
The screen appears unstable and shaky.	Check that the resolution and frequency of the			
There are shadows or ghost images left on the screen.	PC and graphics card are set within a range compatible with the product. Then, change the screen settings if required by referring to the Additional Information on the product menu and the Standard Signal Mode Table.			
The screen is too bright. The screen is too dark.	Adjust Brightness and Contrast.			
Screen color is inconsistent.	Go to <b>Picture</b> and adjust the <b>Color Space</b> settings.			
White does not really look white.	Go to <b>Picture</b> and adjust the <b>White Balance</b> settings.			
There is no image on the screen and the power	The product is in power-saving mode.			
LED blinks every 0.5 to 1 second.	Press any key on the keyboard or move the mouse to return to the previous screen.			

Sound issue				
There is no sound.	Check the connection of the audio cable or adjust the volume			
	("2.2Connecting and Using a PC")			
	Check the volume.			
The volume is too low.	Adjust the volume.			
	If the volume is still low after turning it up to the maximum level, adjust the volume on your PC sound card or software program.			



Remote control issue				
The remote control does not work.	Make sure that the batteries are correctly in place (+/-).			
	Check if the batteries are flat.			
	Check for power failure.			
	Make sure that the power cord is connected.			
	Check for any special lighting or neon signs switched on in the vicinity.			

Source device issue				
A beeping sound is heard when my PC is	If a beeping sound is heard when your PC is			
booting.	booting, have your PC serviced.			



## 12.2 Q&A

Question	Answer
How can I change the	Set the frequency on your graphics card.
frequency?	<ul> <li>"Windows XP": Go to Control Panel → Appearance and Themes → Display → Settings → Advanced → Monitor and adjust the frequency in Monitor Settings.</li> </ul>
	<ul> <li>"Windows ME/2000": Go to Control Panel → Display →         Settings → Advanced → Monitor and adjust the         frequency in Monitor Settings.</li> </ul>
	<ul> <li>"Windows Vista": Go to Control Panel → Appearance and Personalization → Personalize → Display Settings → Advanced Settings → Monitor and adjust the frequency in Monitor Settings.</li> </ul>
	<ul> <li>"Windows 7": Go to Control Panel → Appearance and Personalization → Display → Adjust resolution → Advanced Settings → Monitor and adjust the frequency in Monitor Settings.</li> </ul>



Question	Answer
How can I change the resolution?	<ul> <li>"Windows XP": Go to Control Panel → Appearance and Themes → Display → Settings and adjust the resolution.</li> </ul>
	<ul> <li>"Windows ME/2000": Go to Control Panel → Display → Settings and adjust the resolution.</li> </ul>
	<ul> <li>"Windows Vista": Go to Control Panel → Appearance and Personalization → Personalize → Display Settings and adjust the resolution.</li> </ul>
	<ul> <li>"Windows 7": Go to Control Panel → Appearance and Personalization → Display → Adjust Resolution and adjust the resolution.</li> </ul>
How do I set power-saving mode?	<ul> <li>Windows XP: Set power-saving mode in Control Panel →         Appearance and Themes → Display → Screen Saver         Settings or BIOS SETUP on the PC.     </li> </ul>
	<ul> <li>Windows ME/2000: Set power-saving mode in Control         Panel → Display → Screen Saver Settings or BIOS     </li> <li>SETUP on the PC.</li> </ul>
	<ul> <li>Windows Vista: Set power-saving mode in Control Panel →         Appearance and Personalization → Personalize →         Screen Saver Settings or BIOS SETUP on the PC.     </li> </ul>
	<ul> <li>Windows 7: Set power-saving mode in Control Panel →         Appearance and Personalization → Personalize →         Screen Saver Settings or BIOS SETUP on the PC.     </li> </ul>

Refer to the user manual for your PC or graphics card for further instructions on adjustment..

## 13

## **Specifications**

### 13.1 General

Model Name		ME40A	ME46A	ME55A		
Panel	Size	40 inches (101 cm)	46 inches (116 cm)	55 inches (138 cm)		
	Display area	885.6mm(H) x 498.15mm(V)	1018.08mm(H) x 572.67mm(V)	1209.6mm(H) x 680.4mm(V)		
Synchronization	Horizontal	30~81kHz				
	Vertical	48~75Hz				
Display (	Color	16.	7M	1.07B		
Resolution Optimum resolution		1920x1080 60Hz				
Maximum resolution		1920x1080 60Hz				
Maximum Pi	Maximum Pixel Clock		148.5MHz (Analog, Digital)			
Power Supply		This product uses 100 to 240V. Refer to the label at the back of the product as the standard voltage can vary in different countries.				
Signal con	nectors	D-Sub, DVI, DP (Display), HDMI port				
USE	3	1DOWN				
Dimensions (W x H x D) / Weight		920.0 X 534.5 X 29.9 mm / 10.5 kg	1055.2 X 610.8 X 29.9 mm / 12.5 kg	1246.4 X 718.2 X 29.9 mm / 17.1 kg		
VESA Mounting Interface		200 x 200 mm 400 x 400 mm				
Environmental Operating		Temperature: 32°F ~ 104F (0°C ~ 40°C)				
considerations		Humidity: 10 % ~ 80 %, non-condensing				
Storage		Temperature: -4°F ~ 140°F (-20°C ~ 60°C)				
		Humidity : 5 % ~ 95 %, non-condensing				

- Plug-and-Play: This monitor can be installed and used with any Plug-and-Play compatible systems. Two-way data exchange between the monitor and PC system optimizes the monitor settings. Monitor installation takes place automatically. However, you can customize the installation settings if desired.
- Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may appear brighter or darker on the panel. This does not affect product performance.
- Class A (Information Communication equipment for industrial use)

  Attention dealers and users. This device is registered for EMC requirements for industrial use (Class A) and can be used in areas other than general households.

## **Specifications**

#### (USA only)

Dispose unwanted electronics through an approved recycler.

To find the nearest recycling location, go to our website:

www.samsung.com/recyclingdirect or call, (877) 278 - 0799

### 13.2 PowerSaver

The power-saving function of this product reduces power consumption by switching off the screen and changing the color of the power LED if the product is not used for a specified period of time. The power is not turned off in power-saving mode. To switch the screen back on, press any key on the keyboard or move the mouse. Power-savign mode only functions when the product is connected to a PC with a power-saving function.

State	Normal Operation	Power saving mode	Power off (Power Button off)
Power Indicator	On	Blinking	Off
Power Consumption	ME40A : 100 W	less than 1 W	less than 1 W
(Typical)	ME46A: 140 W		
	ME55A: 160 W		



- The displayed power consumption level can vary in different operating conditions or when settings are changed.
- SOG (Sync On Green) is not supported.
- To reduce the power consumption to 0, turn off disconnect the power cord. Disconnect the power cable if you will not be using the product for an extended period of time (during vacation, etc.).

## 13

## **Specifications**

## 13.3 Preset Timing Modes



- This product can be set to only one resolution for each screen size to obtain the optimum picture
  quality due to the nature of the panel. Using a resolution other than the specified resolution may
  degrade the picture quality. To avoid this, it is recommended that you select the optimum
  resolution specified for your monitor.
- Check the frequency when you exchange a CDT monitor (connected to a PC) for an LCD monitor.
   If the LCD monitor does not support 85Hz, change the vertical frequency to 60Hz using the CDT monitor before you exchange it with the LCD monitor.

The screen will automatically be adjusted if a signal that belongs to the following standard signal modes is transmitted from your PC. If the signal transmitted from the PC does not belong to the standard signal modes, the screen may be blank with the power LED on. In such a case, change the settings according to the following table by referring to the graphics card user manual.

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
IBM, 640 x 480	31.469	59.940	25.175	-/-
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	31.469	59.940	25.175	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 848 x 480	31.020	60.000	33.750	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 x 768	47.776	59.870	79.500	-/+



## Specifications

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 1280 x 960	60.000	60.000	108.000	+/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1360 x 768	47.712	60.015	85.500	+/+
VESA,1920 x 1080	67.500	60.000	148.500	+/+
VESA,1920 x 1080	66.587	59.934	138.500	+/-



#### Horizontal Frequency

The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

#### Vertical Frequency

The product displays a single image multiple times per second (like a fluorescent light) to display what the viewer sees. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

## 13

## **Specifications**

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## **Contact SAMSUNG WORLDWIDE**



If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

	NORTH AMERICA	
U.S.A	1-800-SAMSUNG (726-7864)	http://www.samsung.com
CANADA	1-800-SAMSUNG (726-7864)	http://www.samsung.com/ca
		http://www.samsung.com/ca_fr (French)
MEXICO	01-800-SAMSUNG (726-7864)	http://www.samsung.com

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	From mobile 02-482 82 00	
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PERU	0-800-777-08	http://www.samsung.com
PUERTO RICO	1-800-682-3180	http://www.samsung.com
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### Optimum Picture Quality and Afterimage Burn-in Prevention

#### **Optimum Picture Quality**

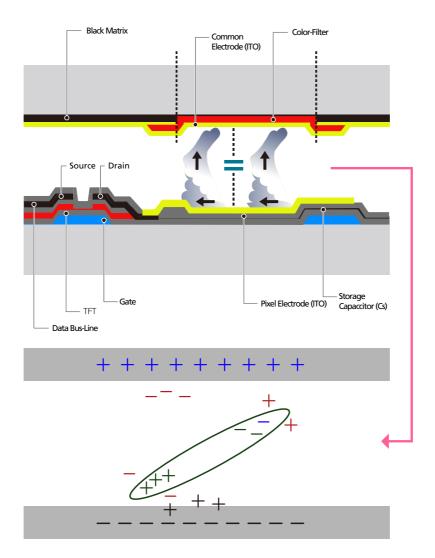
- To enjoy the optimum picture quality, go to Control Panel on your PC and adjust the resolution and refresh rate as follows. The picture quality of TFT-LEDs may degrade if the optimum resolution is not selected.
  - Resolution: 1920 X 1080
  - Vertical frequency (refresh rate): 60Hz
- Due to the nature of the manufacturing of this product, approximately 1 pixel per million (1ppm) may be brighter or darker on the LED panel. This does not affect product performance.
  - □ The number of sub-pixels by LED panel type: 40 : 6,220,800
- Run "Auto Adjustment" to improve the picture quality. If noise is still found even after auto adjustment, adjust Coarse or Fine.
- Leaving the screen fixed on a stationary image for an extended period of time may cause afterimage burn-in or defective pixels.
  - Activate power-saving mode or a dynamic screen saver if you will not be using the product for an extended period of time.
- Unlike CDT monitors, TFT-LED monitors (due to the nature of the panel) can be set to only one resolution to obtain the optimum picture quality. Therefore, setting a resolution other than the specified resolution may degrade the picture quality. To avoid this, it is recommended that you select the optimum resolution specified for your monitor.

#### Prevention of Afterimage Burn-in

What is afterimage burn-in?

Afterimage burn-in should not occur when the LCD panel is operating normally. Normal operation refers to a continuously changing video pattern. If the LCD panel displays a fixed pattern for an extended period of time (more than 12 hours), a slight voltage difference may occur between the electrodes in pixels that control the liquid crystals.

Such a voltage difference between electrodes increases with time and makes the liquid crystals thinner. When this occurs, a previous image can remain on the screen when the pattern changes. To prevent this, the accumulated voltage difference should be reduced.



- Powering Off, Screen Saver and Power Saving Mode
  - Power off the product for 2 hours after using it for 12 hours.
  - Go to Display Properties > Power Supply on your PC and set the product to power off as required.
  - Using a screen saver is recommended.
     It is best to use a single-color or moving-image screen saver.
- Regular Color Change





Use 2 colors

Switch between 2 colors every 30 minutes as shown above.

Avoid combinations of a text color and background color of contrasting brightness.

Avoid using grey as it may contribute to afterimage burn-in.

Avoid using colors of contrasting brightness (black and white; grey).



- Regular Text Color Change
  - Use bright colors of similar brightness.
     Interval: Change text color and background color every 30 minutes



Move and change text every 30 minutes as shown below.



- Regularly display a moving image along with a logo.
  - Interval: Display a moving image along with a logo for 60 seconds after using for 4 hours.
- The best way to protect the product from afterimage burn-in is switching the power off or setting the PC or system to run a screen saver when not in use. Also, Warranty service may be limited depending on instruction guide.

## **Terminology**

#### **Dot Pitch**

The product and screen consist of red, green and blue dots. A shorter distance between the dots produces a higher resolution. Dot pitch refers to the distance between the shortest distance between dots of the same color. Dot pitch is measured in millimeters.

#### **Vertical Frequency**

The product displays a single image many times per second (like a fluorescent light that flickers) to display an image for a viewer to see. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

E.g. 60Hz refers to a single image being displayed 60 times in one second.

#### **Horizontal Frequency**

The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

#### Non-interlace Mode and Interlace Mode

Non-interlace mode (progressive scan) displays a horizontal line from the top to the bottom of a screen progressively. Interlace mode displays the odd number lines first and the even number lines next. Non-interlace mode is mainly used in monitors as it produces screen clarity and interlace mode is mainly used in TVs.

#### Plug & Play

Plug & Play is a function that allows the automatic exchange of information between a monitor and PC to produce an optimum display environment. The product uses VESA DDC (international standard) to execute Plug & Play.

#### Resolution

Resolution is the number of horizontal dots (pixels) and vertical dots (pixels) that form a screen. It represents the level of display detail. A higher resolution enables more data to be displayed on the screen and is useful to perform multiple tasks simultaneously.

E.g. A resolution of 1920 X 1080 consists of 1,920 horizontal pixels (horizontal resolution) and 1,080 vertical pixels (vertical resolution).

#### Multiple Display Control (MDC)

MDC (Multiple Display Control) is an application that allows multiple display devices to be controlled simultaneously using a PC. Communication between a PC and monitor takes place using RS232C (serial data transmission) and RJ45 (LAN) cables.

#### **DVD(Digital Versatile Disc)**

DVD refers to a CD-sized mass storage disk where you can save multimedia (audio, video or game) applications using MPEG-2 video compression technology.

#### HDMI(High Definition Multimedia Interface)

It is an interface that can be connected to a digital audio source as well as a high-definition video source by using a single cable without compression.

#### Component ports (green, blue and red)

The component ports, which identify, transmit and receive contrast signals, provide superior picture quality to any other video connection methods.

#### Stereo

Stereo refers to a technology that outputs audio signals via two channels. It delivers 3D sound experience through separate left and right audio channels over two speakers.

#### Source

Input source refers to a video source device connected to the product such as a camcorder or video or DVD player.

#### 480i / 480p / 720p / 1080i / 1080p

Each of the scanning rates above refers to the number of effective scanning lines that decides the screen resolution. The scanning rate may be indicated in i (interlaced) or p (progressive), depending on the scanning method.

- Scanning

Scanning refers to a process of sending pixels that form an image progressively. A larger number of pixels will deliver a clearer and more vivid picture.

- Progressive

In progressive scan mode, all lines of pixels are scanned one by one (progressively) on the screen.

- Interlaced

In interlaced scan mode, every other line of pixels is scanned from top to bottom first and then the remaining lines of pixels (that were not scanned) are scanned.

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